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ART. I.—FORMS OF MINORITY REPRESENTATION.

It is not proposed to discuss in this place the principle of minority representation. In some form or other that principle is recognized in all governments which are called free,—although, it must be confessed, nowhere to its fullest extent. The admission of opposition members into any legislative assembly is a partial but practical acknowledgment of its justice. In its commonest form minority representation is nothing more than a concession of sectional rights. Each State is assigned a certain number of representatives in Congress, and the States again divide themselves into single districts. Nothing is more common than for one or more congressmen to be elected from a State which is, on a general vote, opposed to them in politics. This division and subdivision are carried down to the arbitrary division of a city into wards, each entitled to elect certain officers. The purpose of the whole system is to grant the right of representation to minorities, be they parties or local sections of the entire constituency, in proportion to their numbers. The rule that the majority should govern, if carried out relentlessly in the election of representatives, would obliterate all election district lines and lead to a general vote of the whole body of the people for the whole legislative assembly. Such assemblies would then be entirely composed

of members of one party, and would carry out the wishes of the majority, without interference from an opposition.

But the usual form of minority representation has been found faulty in more ways than one. The arts of the politician are equal to an almost complete neutralization of the power to accomplish what was intended by the adoption of the district system. What is known as gerrymandering enables the majority to arrange districts in such a way as to throw the control of an undue proportion of those districts into its own hands. There is one county in Maine entitled to thirteen representatives in the Legislature, which has been so districted that, although more than one third of the voters are Democrats, there is but one district in the county which is likely to be carried by the Democrats, except by accident or in time of a political revolution. The consummate art of such gerrymandering is the more apparent when it is added that the districts are in every case made up of adjoining towns, are of nearly equal size, and no glaring injustice can be alleged except in the result accomplished. Nor is it to be expected that, under our present system, this method of forming districts will be bettered. It is the necessity of every party to perpetuate its power; and as long as the simple expedient of skilful districting will accomplish the object, and the appearance of fairness can be preserved, the true purpose of the district system will not be met. Again, the practice of division and local representation necessarily diminishes the range of selection of candidates. It is quite common to find the men fittest for the assembly to be chosen congregated in one district, while several other adjoining districts are quite bare of suitable candidates. It has been frequently remarked that the average ability of the State Senate of Massachusetts has decreased since the adoption of the single district system. Not to discuss whether the fact is more than a coincidence, it may be remarked that the tendency of the finer division is certainly to circumscribe the power of choice, and to give an opportunity for the election of less competent representatives. This difficulty is easily met by repealing all laws requiring representatives to be residents of the district for which they are chosen, and by inducing the voters to estimate at its true value the local pride that has been the basis

of all such laws. In the several systems proposed as substitutes for the existing methods, the obliteration of district lines, or a vast enlargement of the boundaries of districts, and the abandonment of local representation, constitute a prime condition for their success.

The alleged failure of the district system, and the apparent unfairness to minorities which it involves, have led thinkers in this country, and to a still greater extent in Europe, to cast about for a new plan which shall both do greater justice to the several factions in a constituency and secure a higher order of talents in the representatives. The soundness of the objections to the present system, and the reasonableness of the cry against the tyranny of majorities, have been already discussed.* We therefore propose now simply to examine, in the light of experience, the several substitutes put forward so confidently by their supporters, in order to ascertain whether any one of them has advantages so great that we can afford to adopt it into our political system.

The problem to be solved in creating a new system to secure due representation to two or more parties or classes of opinion is a difficult one. Such a system should not be much less simple and easy of comprehension than that which it supplants. It must abolish all district lines or make the districts so large as to give a greatly increased range of selection. It must be flexible enough to adapt itself to large and small districts alike. Political managers must be deprived of power to defeat its purpose, as they have succeeded in doing with the district system. It must not, under the guise of minority representation, introduce minority government.

The several plans proposed may be classed under three general heads: (1.) The limited vote; (2.) The cumulative vote; and (3.) The single vote. To the first class belong all plans which allow the elector to vote for a fixed number of persons less than the whole number to be chosen; to the second, all plans which give him a certain number of votes to distribute as he pleases; to the third, all plans which allow each vote to count for only one of several persons on the ballot, although more than one are to be chosen.

* *North American Review*, Vol. CIV., 1867, p. 205.

The limited vote has been adopted for use in this country and in Europe, in several forms. Two members of the board of supervisors of New York county are chosen each year. The law provides that no person shall vote for more than one candidate. He who receives a majority is elected, and the next highest candidate is appointed supervisor. This plan, which was intended to divide representation between the two parties, worked well for several years. A non-partisan body was secured, the Democratic candidate being always elected and the Republican appointed. But it was not minority representation. The minority was as strong in the board as the majority. At last the keen New York politicians scented out a way to defeat the intent of the law, while keeping to its letter. The Democrats outnumbered the Republicans in the city by more than two to one. An arrangement was made by which the Democrats in certain wards should vote for A, and those in others for B. A had the largest number, and was elected ; B stood next, and was appointed ; while poor C, the Republican candidate, was left out altogether. Since that brilliant discovery the Republicans, numbering nearly a third of the votes of the city, have been unable to elect a supervisor. A rather better opportunity to carry out this plan was furnished by the elections to the late Constitutional Convention of New York. Twenty members were to be chosen from the State at large, and no elector was to vote for more than ten. The State was very closely divided in politics, and the inevitable result was the choice of ten of each party. This was also equality of representation to the majority and the minority, but no great injustice was done, because the parties were nearly equal in strength. Its chief advantage was that which invariably flows from having large districts. The twenty members chosen at large ranked among the very ablest in the convention. A modification of the same plan is in use in New York in the election of judges according to the new judicial article framed by that convention, — the fragment of its work which escaped destruction at the hands of the voters, — and is also employed in various localities in the selection of supervisors and inspectors of elections.

In Europe we find two modifications of this principle, unlike

each other and unlike the forms which have been put in practice in this country. The first to be noticed is that which was applied in England by the last parliamentary Reform Bill to what are known as three-cornered constituencies,—boroughs entitled to elect three members. The limited vote was applied to such constituencies by forbidding any elector to vote for more than two members. It is not exceeding the truth to say of this plan that it entirely failed. It was clumsy, it was arbitrary, and it did not in all cases secure representation to the minority. It assumed that the power of the majority would be to that of the minority in the proportion of two to one. If the politicians did not attempt to thwart the purpose of Parliament in inserting this clause, a majority consisting of nine thousand voters in a body of ten thousand would elect two members, and a minority of one thousand would choose the third. The proportion must be the same if the majority consisted of fifty-five hundred and the minority of forty-five hundred. There could be very few cases where absolute justice would be done, and, good or bad, there was absolute injustice in applying to a dozen or fewer constituencies a system of minority representation which was enforced nowhere else. It was but a party trick of the Tories, and the Liberals easily found a way to circumvent it. The instance of the Birmingham election is to the point. The Liberals believed themselves to have two thirds of all the votes at their command, and they reasoned correctly, that, if each man of their party could be instructed for which two candidates to vote, they could carry all three members. Thus in one district all Liberals would vote for Messrs. Muntz and Dixon, in another for Messrs. Dixon and Bright, in a third for Messrs. Bright and Muntz. The result met their expectations. They elected all their candidates. There was one curious fact about the election which shows the danger of this method of defeating the purpose of Parliament. John Bright was the most popular of all the candidates. So eager was every Liberal in Birmingham to vote for him, that it was with great difficulty that the arrangement was carried out in those districts where he was not to be brought to the poll. It is easy to see that the refusal of a few voters to obey instructions might have lost two members to the Liberals, and thus we

should have had the strange result of a professed system of minority representation giving double representation to a minority of less than one third. The effort of the Liberals to carry all the members was perfectly legitimate. The very theory of the advocates of the principle is to give to each class in the community a power in the legislature proportioned to its numbers. It is a perversion of the principle if less than one third of the electors can elect one third of the members, and a far more dangerous result than for a majority to elect the whole list. No arrangement of the kind practised at Birmingham could be successful if the majority did not consist of at least two thirds of the voters. But this form of the limited vote having been tried and failed, it is not likely to be put in practice anywhere else.

The only remaining modification of the limited vote is what is called the Geneva *liste libre*, or free list, and it differs essentially from any yet mentioned; indeed, the differences are so great that it might be classed almost as properly with single-vote systems. It is somewhat singular that this system is of American origin, having been first proposed by Mr. Thomas Gilpin, in a pamphlet published in Philadelphia in 1844. It was probably the first attempt to solve the problem now before us. Considered simply as a system of minority representation, it may claim to combine simplicity and fairness more perfectly than any other. As we shall see hereafter, it is precisely the form which an altogether different plan will assume in the not improbable contingency that the politicians attempt to bend it to their own purposes. The several parties prepare a full list of candidates equal to the whole number to be chosen. Each voter casts the whole ballot. The whole number of ballots having been ascertained, it is divided by the number of places to be filled, and each ticket is entitled to these places in proportion to the number of ballots it is found to have received. Thus, suppose the State of New York to have voted for her thirty-one representatives in Congress on this system in 1870, and suppose also that Tammany, Mozart, and the two wings of the Republican party were each in the field with a full ticket of thirty-one candidates. Tammany we will say cast 310,000 votes; Mozart, 89,000; the Radical Repub-

licans, 183,000 ; and the Conservative Republicans, 183,000. By the free-list method thirteen representatives are elected by Tammany, four by Mozart, seven by the Radical, and seven by the Conservative Republicans. A more accurate division would have given to Tammany twelve, and to Mozart three ; but each of these wings having larger fractions remaining after assigning them the quota to which they are absolutely entitled, they take the two additional members. The lists have been arranged by the parties in the order of their preference, and the successful candidates are taken from the head of the list. Under the district and caucus systems combined, it has happened that a fusion of the two wings of the Democrats have carried but fifteen representatives, and the Republicans, who are in a minority of no less than thirty-three thousand votes, have obtained sixteen representatives in the present Congress. With an arrangement of the list according to preference, and with that preference accorded to the best men in the party, added to a due enlargement of voting districts, we should attain under this system not only an approach to absolute accuracy in apportioning representatives among two or more parties, but the best promise of pure and able legislatures. But unfortunately, while the free-list system has the advantage of being wellnigh perfect as a machine for securing proportionate representation, it has some faults not to be overlooked. It does away completely with the individuality of the vote. However bad a party nomination may be under the existing system, the electors have an unfailing remedy in the bolt. The free-list method of voting necessarily recognizes parties. The regular ticket is legitimized. The working of the plan in this country might be predicted at the start. The caucus would put at the head of the ticket the favorite of the "ring," if a ring existed within the party. Lower down would be found the names relied upon to give the ticket strength with the best elements of the party. It would then become every voter's duty to vote the regular ticket ; because the success of the first-named, or "ring," candidates being assured, the more votes that were given to the ticket as a whole the further into the list of respectable names would the number of elected candidates go. "Scratching" could effect nothing in the way of

defeating the ring candidates, and the only result would be that the mutilated ballots would be thrown aside as scattering, and wholly lost. Even a thoroughly organized bolt would in many cases secure the election of fewer of the better class than would a blind adherence to the regular nominations ; because in apportioning the elections, two fractions of the quota would be lost, where only one would be lost if the party was united. An illustration will show how this might happen. In a constituency of twelve thousand voters there are seven deputies to be elected. The quota is therefore 1,714. The stronger party has a majority of 200, the division being 6,100 and 5,900. Each party would be manifestly entitled to three representatives, and the majority, having the larger fraction, takes the seventh member. The candidates of the majority are A, B, C, D, E, F, and G, and of the minority H, I, K, L, M, N, and O. The seven who are elected in this case are A, B, C, D, H, I, and K. We will suppose, however, that the ring has put A and B at the head of the ticket, and that a bolt is organized to defeat them. The dissatisfied party commands at the election anywhere from 1,950 to 2,450 votes. It has put up as candidates C, D, E, P, R, S, and T. At any point between the supposed limits, 1,950 to 2,450, it can elect but one of its candidates, C. The regular party, having lost so large a number of its supporters, can elect but two members, A and B, the favorites of the ring. Supposing that the bolt carries 2,200 votes, 3,900 are left to the regular ticket. This gives it two members with a remainder of 472, the bolt gets one member with a remainder of 486, and the minority, having already three members, and a remainder of 758, takes the seventh member. By this means the ring has got all it wished in the election of A and B, the bolters have only chosen C, when by following the regular ticket they might have had D also, and the minority controls the delegation. We surely need put no longer whip into the hands of political managers in this country than they already hold over us. At the same time it is to be said, that, while the free list rivets upon us the chains of party, that is practically the only evil of the present system which it aggravates. Its simplicity and the general fairness of the probable results recommend it more strongly to our serious

consideration than any other of the numerous substitutes proposed for our present method.

The cumulative vote has attained a greater popularity in this country than any other method of bringing about the reform proposed. Ex-Senator Buckalew, of Pennsylvania, has made it his special hobby to secure the adoption of a representative reform based upon the cumulative vote, but while in the Senate he made no other progress than to procure the insertion of a report on the subject in the Appendix of the Congressional Globe. Since his retirement from national politics he has been successful in causing the adoption of the principle in certain classes of municipal election in Pennsylvania. The reports of the results are generally favorable, but no particulars are furnished. On the strength of the theoretical virtues of the principle of cumulative voting, the late Constitutional Convention of Illinois inserted a clause applying it to all elections of representatives to the Legislature hereafter, and the people have made it a part of the Constitution. The State is divided into districts, each entitled to elect three members. The voters are permitted to distribute their three votes as they please, giving all three to one candidate, one to each of three, or two to one candidate, and the third to a second. Passing over for the moment the consideration of this principle as applied to the lower house of the Illinois Legislature, let us examine it in its practical working on a scale hardly less extensive, and under conditions much more varied.

The recent act of Parliament known as the Education Act provided conditionally for the establishment of school boards in all the larger towns of England. It contained special provisions in relation to the election of the school board for London. The several metropolitan boroughs became districts for the choice of members in precisely the same way as the States of the Union would constitute districts for the election of congressmen, if each State chose all its members by general ticket. It was enacted that the ballot should be used in the elections in all the boroughs except the city, and the terms of the act were susceptible of an interpretation which permitted women householders, not only to vote, but to be eligible as members. There were, therefore, in this election all the conditions for a

fair trial of the cumulative vote. The complication of woman suffrage and the ballot with the trial of this system really rather conduced to the fairness of the experiment than detracted from it. The interest in the working of the ballot, and the novelty of seeing women voting and voted for by the side of men, attracted so much attention that the cumulative vote was left to its natural working. It is doubtful whether more favorable circumstances could have been devised for putting it to a preliminary test. That the use of the ballot at least did not interfere with the working of the system is proved by the fact that the result in the city borough, which voted *viva voce*, enforces every lesson derivable from an examination of the returns from the boroughs where "voting-papers" were employed.

We may say, without any qualification, that the result everywhere proved the system to satisfy completely the first requirement of a substitute for our present methods. It was so simple that the dullest voter could comprehend it. To be sure the electors had some assistance in the official ballot that was furnished. Candidates were proposed according to a well-ordered method,* and only those thus regularly proposed were eligible. The names were all printed on a ballot which was handed to each voter, and all that was left for him to do was to strike off the names of those for whom he did not wish to vote, and write opposite to those remaining the number of votes he wished to give to each. But notwithstanding this aid, it is surprising to find that not more than one vote in a hundred, in a constituency not remarkable for the diffusion of education, was thrown out for informality of any kind on the first trial of the system; and this result did not arise from non-use of the cumulative feature. Indeed, although we are compelled to deduce the results by means of arithmetic, in the absence of official statements on this point, it is capable of demonstration, that, out of a total number of twenty-one thousand ballots received in the Tower Hamlets division, not more than seven hundred and thirty-four (and undoubtedly the number was

* A certain number of electors were allowed to present a name. At a specified time before the election the list of candidates was advertised. During the following week candidates might decline to have their names used, but after that time no candidate could withdraw.

much smaller) cast one vote for each of five candidates, or, in other words, did not mass more than one vote upon a single candidate. And the most popular of all courses was to "plump" all the votes on a single favorite, as in the Tower Hamlets, to use the same example, where more than ten thousand "plumpers" of five votes were cast. It may be mentioned as a further proof that the system is perfectly intelligible, that a large proportion of the rejected votes were thrown out because the elector had signed his ballot, which was strictly forbidden by the law.

There was no difficulty about the second requirement, namely, an increase of the range of choice, because any resident of London was eligible as a member for any district. And in general, it hardly needs to be said, every system of minority representation requires that every district shall be assigned at least three members, or it wholly fails of its purpose. As to its flexibility and adaptability to large districts and small, we are furnished with very few data; but, as will be seen, the actual results were so wide of the mark aimed at,—justice and proportional representation,—that the system must be equally condemned for all. There are the same inequalities noticeable in the returns from every district whose vote we are able to analyze, but it appears that the opportunity for an unfair result is much greater as the constituency is enlarged. In London no district was assigned more than seven members, and no one less than four. It ought to be true of any scheme that approaches perfection, that it comes nearer to the ideal result of exactly proportional representation as the constituency is widened and the number of representatives is increased. There is certainly little merit in one which must be restricted to the narrowest limits to prevent its becoming dangerous. It is very likely that an enlargement of districts would give an increased independence to individual voters. The right of cumulation encourages the formation of small cliques less liable to be controlled by caucuses than great and powerful parties. This is, from one point of view, an advantage, but practically its tendency is to divide responsibility, render the action of the elected body less free, and make representatives of all parties timid. It appears that in a large district the feature of proportional representation disappears. We expect to show that in a small district, while

it is nearly as certain that injustice will be done, there is the added certainty that the voters will be bound as strongly as they now are by the decrees of the caucus. Most of these facts will appear on an examination of the analysis which follows. But the main lesson of the analysis, after all, is that this device for proportional representation, so far from accomplishing that object, continually jeopardizes the proper supremacy of the majority.*

* For the purpose of illustration, we have selected the returns from the borough of Marylebone, which is the largest constituency in London, and was assigned seven members of the school board. The candidates, with the cumulated vote given to each, will be seen from the following general return of the result. The candidates who were elected are designated by an asterisk: —

Miss Garrett*	47,858	Mr. Garvey	4,933
Professor Huxley *	13,494	Mr. Marshall	4,668
Rev. Mr. Thorold *	12,186	Mr. Guedalla	4,635
Rev. Dr. Angus *	11,472	Mr. Cremer	4,402
Mr. Hutchins *	9,253	Mr. Edmunds	3,973
Mr. Dixon *	9,031	Mr. Verey	2,130
Mr. Watson *	8,355	Mr. Stanford	1,486
Mr. Mills	7,927	Mr. Wyld	334
Mr. Powell	7,852	Mr. Dunn	258
Mr. Whelpton	5,759	Mr. Brewer	103
Mr. Waterlow	4,994	Mr. Beare	62

We append an analysis of the above vote: —

Candidate.	Ones.	Twos.	Threes.	Fours.	Fives.	Sixes.	Sevens.	Total.
Garrett,	1,414	1,674	2,687	1,779	340	80	3,677	11,651
Huxley,	852	1,559	1,080	765	65	34	385	4,740
Thorold,	2,698	1,062	741	488	47	14	410	5,460
Angus,	3,001	1,152	693	446	48	15	282	5,637
Hutchins,	286	182	160	129	36	21	1,043	1,857
Dixon,	839	941	600	323	51	9	403	3,166
Watson,	2,535	599	429	222	36	15	311	4,147
Mills,	2,620	707	494	296	19	2	160	4,298
Powell,	2,485	714	468	274	22	8	183	4,154
Whelpton,	258	237	240	148	34	18	491	1,426
Waterlow,	664	498	354	173	21	9	203	1,922
Garvey,	2,495	411	195	81	11	6	88	3,287
Marshall,	2,395	266	147	96	23	4	111	3,042
Guedalla,	425	381	211	115	30	14	303	1,479
Cremer,	548	620	316	173	17	6	79	1,759
Edmunds,	221	253	189	139	19	9	282	1,112
Verey,	80	93	83	71	13	4	179	523
Stanford,	110	88	36	41	7	2	113	397
Wyld,	36	20	18	7	2	2	22	107
Dunn,	37	9	20	11	2	2	11	92
Brewer,	23	8	5	7	—	—	3	46
Beare,	14	2	3	4	—	—	1	24
Totals,	23,036	10,476	9,169	5,788	843	274	8,740	58,326

These tables furnish us with ample means for judging of the cumulative vote as applied under the most favorable circumstances, and as exhibiting its virtues and defects in the plainest light. We learn from them both the number of persons voting for each candidate, and the relative cumulation for each.

It is unfortunate that parties were not better defined in the contests for the London school board. As this was the first experiment of putting secular schools in the control of the people, the religious question was the most prominent in the contest; and there were as many parties as there were classes of belief. Professor Huxley was the candidate of the radicals in religion, Mr. Watson of the Presbyterians, Mr. Thorold of the Church party, Mr. Hutchins of the Roman Catholics, and there were workingmen's candidates, Unitarians, and others not classified. Nevertheless, we can discover the practical workings of the system nearly as well as if the parties were only two in number.

It is rather interesting than important that there was not in either of the London boroughs a candidate who received the votes of an absolute majority of the electors in the borough for which he stood. Even the extraordinary popularity of Miss Garrett, who obtained more than three times as many votes as her nearest neighbor on the poll, caused her to be the choice of only 11,651 persons out of 23,619 exercising the right of suffrage in Marylebone. The small number of sixes given will also be noticed. The curious fact which it illustrates was noticeable in every borough. Where six candidates were to be chosen, the division into five and one was the least popular; where five were to be chosen there were very few who gave four to one candidate and one to a second.

Passing to an examination of the above analysis for practical lessons, the first striking fact is the extraordinary vote received by Miss Garrett. With the causes of this result we have nothing to do, but it may be remarked that it was due to the most thorough canvassing and electioneering, added to the popularity of the lady and the principle she represented. The result itself is important in its teachings. The supporters of Miss Garrett had the absolute power to elect three out of the seven members for Marylebone, and in the division of the voters into factions which actually prevailed, they would probably have elected four. Let us see what a careful as well as brilliant canvass might have done. If the 3,677 electors who each gave her all seven of their votes had cast their 25,739 votes elsewhere, and all who gave her six, five, and four

votes each had done the same thing, she would still have had 11,823 votes and stood third on the list. The remaining 35,035 votes, distributed among three other candidates, would have given 11,678 to each of them and elected them all, thus giving to a resolute minority an almost irresistible power to elect a majority of the delegation. It need not be said that equally good arrangements with the union of all opposing elements must inevitably have defeated such an effort to control the board. The lesson of Miss Garrett's vote may be concisely stated. The cumulative vote is wasteful. It will always be impossible for a party to decide to what extent it must concentrate its powers. The defect is more obtrusive and works greater mischief the further the constituency is enlarged, whereas a perfect system of minority representation will be more self-adjusting, and will work more substantial justice the larger the districts. It has been proposed in England that the state of the poll be published officially at fixed times, giving information that would put a stop to the waste of votes. In some cases this might be useful, but in many others it might induce an unauthorized sense of security, leading voters to refrain from giving any more ballots to a candidate who seems sure of an election, wasting the rest, and thus losing all, in a vain attempt to carry through another candidate of the same opinions.

The wastefulness of votes may be shown in another way. It needs no very sharp eye to see by the analytical table given above that there was a full ticket of seven nominated and voted for by many persons who did not make use of the privilege of concentration at all, but gave one vote to each of seven candidates. These were Drs. Thorold and Angus and Messrs. Watson, Mills, Powell, Garvey, and Marshall. It may be shown, by means of a calculation which we omit, that the smallest possible number of voters capable of casting the votes which these gentlemen received is 8,205. Properly concentrated, these electors would have been absolutely sure of carrying two members, and would then have had a fraction remaining of more than one half the quota to use in electing the third. As a matter of fact three were chosen, but it was in consequence of the mere chance that others besides themselves wasted votes. With complete concentration by all parties, a cumu-

lated vote of 23,619 would be necessary to elect a candidate, and yet Mr. Thorold, who stood at the head of the list of seven, got but 12,186. Dr. Angus fell seven hundred short of that number, and Mr. Watson had hardly more than one-third of the proper quota. In the Birmingham school board election actual mischief was wrought. The liberals, with about two thirds of the voters, attempted to carry too many members, and actually came out of the contest with but two fifths of the members.

Such wastefulness is the opportunity of the minority. Let us look at Mr. Hutchins's vote. Mr. Hutchins is a Roman Catholic, and was supported by his coreligionists with characteristic ardor. No waste of votes by them. Only 1,857 several persons voted for him, less than one twelfth of the whole, but the bad generalship of the other parties left open the breach into which they rushed and bore their candidate in triumph. They used the same tactics and with like success in several other constituencies, and are to-day more fully represented in proportion to the number of votes they command than any other sect in the London school board.

Let us now endeavor to apply theoretically the cumulative vote to the election of congressmen in Massachusetts. It must be supposed that all district lines are obliterated and members are chosen from the State at large. It is perfectly obvious that if each party were to make up a full ticket of ten candidates and trust to the voters to "plump" and distribute as they pleased, the result would be anything but satisfactory to the majority. If the average wastefulness of votes was the same on either side, the aggregate wastefulness would be greater on the side of the majority, and consequently theirs would be the loss. An arbitrary division of the State into districts by the leaders of the two parties, based on a canvass, might introduce something like justice into the result, but it would be at the expense of the individual freedom of the voter, and would bring back all the evils of the district system,—especially that slavish subservience to the caucus, which is its worst feature. But if there is to be no understanding, how could the vote for Mr. Dawes be kept down? He would draw plumpers of ten by the thousand in Berkshire and by the hundred in Suffolk. Gen-

eral Butler's admirers might be reasonably expected to treat him with equal honor. Two or three popular Republican members would be supported by numbers altogether beyond what they would require, and some popular Democrats would be similarly favored. Chance only would determine which party should have the rest. It may be argued with perfect truth that the result is solely dependent upon the good sense of the voters, and that the ten persons who have the largest number of votes will be elected. This is, nevertheless, merely a quibble. The result would not reflect the wishes of a majority of the people. If six tenths of the people are Republicans, we must concede that the Republicans should have six members and the Democrats four. But if, by a false estimate of their own strength and a certain independence of impertinent interference by self-constituted leaders, they give their opponents, who manage better, six members, and get only four themselves, such a result does not recommend the system by which it is brought about. It needs neither argument nor figures to prove that such a consequence would follow the adoption of the cumulative vote in all large constituencies at nearly every election, unless every voter is willing to surrender his independence to central committees to an extent never yet anywhere enforced.

We may also briefly consider the probable results of the incorporation of this principle into the Constitution of Illinois. All districts are to be as nearly as possible equal in size, and each is to elect three members. It cannot be pretended by the most ardent advocates of this system that it will secure even an approach to proportionate representation. In general it will probably happen that the majority will choose two representatives and the minority one. This, however, will work as injuriously as the present system, and even more so. In each of five districts in the southern part of the State, the Democrats may elect two representatives and the Republicans one, and this we will say approaches the proper proportion. In another five districts, including the almost unanimously Republican portions of the State, the Republicans will elect two each and the Democrats one. In the ten districts the two parties will have equal representation, although perhaps the Republicans deserve in justice to have a majority of several members. It is useless

to say that the average in the State will bring it all right again. A system of this kind must deal out equity in individual cases to be worthy of cordial support. However liable to unjust results the cumulative vote may be in large constituencies, it loses all its elasticity and becomes dangerous and unwieldy in three-cornered districts such as Illinois has adopted. It has all the faults of the limited vote.

We have spoken of it thus far in connection with the Constitution of Illinois, on the theory that it is to work in practice as the convention expected. We may instance two or three not improbable cases to show that it is open to still graver objection. We suppose, for purposes of illustration, that the senatorial districts, which are assigned three representatives each, have an average voting population of 12,000. In one of these districts, at the last election, the Republicans cast 6,300 votes and the Democrats 5,700. It is by no means exact justice, but it is the nearest practicable approach to it under this system, that the former party should elect two members and the minority one. Messrs. A and B are the Republican candidates, and C and D those of the minority. The Democrats are entitled to only one member, but they hope by superior discipline to choose two. A is a favorite candidate, and B rather less popular. The voters are left free to exercise their preference, the only condition being that they support one or both of the party candidates. The account after the election stands thus:—

Candidate.	Ones.	Twos.	Threes.	Total Voters.	Total Votes.
A,	2,100	3,500	600	6,200	10,900
B,	3,500	2,100	100	5,700	8,000
C,	2,700	2,850	40	5,590	8,520
D,	2,850	2,700	110	5,660	8,580

A, C, and D are elected. The minority of 5,700 have outgeneralled the majority of 6,300, or, rather, the majority, exercising the privilege of independence, have suffered the fate which individual independence always meets when it is opposed by an army of well-drilled slaves. We will next suppose that the majority have 8,900 voters, and the minority but 3,100. The majority, having nearly three fourths of the voters, are entitled to all three of the members, but there is no possible way in which they can obtain them against the con-

centrated minority. Having 26,700 votes in the aggregate, and distributing them evenly, each candidate has 8,900; but the candidate of the minority, receiving 3,100 plumpers of three each, leads the poll with 9,300 votes. Not to multiply instances, it may be said to be the grand defect of the system as applied to small constituencies, like the senatorial districts of Illinois, that it gives a disproportionate representation to small minorities, and an opportunity to large minorities to steal the majority of representation; while it places the majority at every disadvantage, drives it to the necessity of a party discipline and drill more rigorous than anything yet known in our political history, and hands over the whole electoral system to a coterie of managers and tricksters. We await the experiment in Illinois with not a little apprehension. If the theories here advanced be correct, that State has adopted a system which will increase political jobbery and augment the terrors of the party lash, while appearing to be only lending her aid in relieving the distresses of oppressed minorities. The injury, if it be an injury, is wellnigh irreparable. Constitutional changes in the States are slow, and the minority, which gains such undeserved power by the cumulative vote, can for years to come cast insurmountable objects in the way of a return to the old system or the substitution of a better.

The only remaining class of devices for securing minority representation to be noticed are those which limit the elector to one vote, but assure him that his one vote shall not be lost. The several systems that have been proposed differ only in unimportant details. They are all based on the scheme of Mr. Thomas Hare, and no one of the modifications suggested appears to be an improvement. We therefore select the original form as the best exponent of the principle. The principle is threefold. Every body of voters equalling the quotient resulting from the division of the whole number of electors by the number of members to be elected is entitled to a member; the members elected represent the individuals whose votes are counted for them, and not the party to which these individuals belong; hence, as no individual should be represented by more than one member, no vote should be counted for more than one candidate; and, as each member is supposed to represent a certain class of

opinions entertained by a certain body of gentlemen who are not expected to have made a caucus nomination in advance, those holding such opinions should not be condemned to lose their influence on the election, because they chance to prefer before all others a candidate who does not obtain the quota of votes. To illustrate the last principle by a simple case: a quota of thirty-five being necessary by Mr. Hare's system for an election, there are thirty-eight gentlemen holding political opinions equally well represented by A, B, or C. Twenty-eight of these voters prefer A and place B second, and ten reverse the order of preference, the whole twenty-eight putting C third. Our present system of voting would throw away all these votes as counting for nothing, because neither of the three has a plurality. Mr. Hare's scheme not only insists that the ten votes which were given for B shall be transferred to A, thus giving him an election, but it insists that the three votes then in excess of the quota shall be transferred again to C or to some other candidate on the list, until one is found upon whom the quota of electors are agreed.

To exhibit in detail all the workings of the system would far exceed the proper limits of this article. The principle has been many times explained, and imaginary schedules of votes can be drawn up by any one who will devote a forenoon's study to Mr. Hare's treatise, or any other exposition of the scheme. The election of thirty of the eighty members of the Danish Rigsrad is conducted on a principle similar to that of Mr. Hare, and a little earlier in point of time. The inventor was the famous Danish statesman, Mr. Andræ. There are some minor differences between the two schemes, but they need not be mentioned here.* Some of the Danish rules as to the manner of voting and the canvass of the votes would be inadmissible in America. In general the Danish scheme, which was adopted to neutralize the power of some large districts, has worked well, but the opposition to it has by no means died out. We know of but one instance in which the Hare system

* Those who are curious as to the details of the Andræ system may find them thoroughly explained in a report by Mr. Robert Lytton, representative of the British government at Copenhagen, of which a very full abstract was published in the London Daily News for August 30 and 31, 1864.

has been put to a practical test. That case was in the nomination of candidates for Overseers of Harvard College in 1870. It must be admitted that for a first attempt the scheme was wonderfully successful. The results were detailed by Mr. William R. Ware, in an address before the American Social Science Association, at a meeting held in Philadelphia, October 25, 1870, and subsequently exhibited in a still clearer light in a letter to the president of the society, published in the lately issued volume of the proceedings of the Social Science Association. The practical workings of the system may be illustrated by the tally and successive counts of votes given by the students of the Massachusetts Institute of Technology in an imaginary election for four favorite English authors, held just before the Harvard experiment. The whole number of voters was one hundred and forty-four, and the electoral quotient thirty-six. Ballots had been prepared on which several names were suggested, but the voters were to indicate their preference by placing figures representing the order of choice opposite each name, and they were entirely at liberty to add new names as they chose, and in the order of preference. It may be noticed, as a curious illustration of the tendency to follow regular nominations, that all four of the elected were taken from among the names suggested on the printed ballot.*

* The following would be a typical ballot for such an election:—

Preference.	Please add to this list of authors any other names you may prefer, and then indicate your preference among them all by writing the figure 1 against your first choice, 2 against your second choice, and so on.	
13	1	Bacon.
6	2	Shakespeare.
5	3	Scott.
4	4	Byron.
10	5	Burns.
7	6	Macaulay.
9	7	Tennyson.
3	8	Thackeray.
1	9	Dickens.
11	10	Milton.
12	11	Goldsmith.
8	12	Chaucer.
2	13	Reade.

The first eight only of the names above given were on the printed ballot supplied to the voters, and the others are added to extend the illustration. The progress of the count will be understood from the following table:—

Mr. Ware sums up the results of two trials of this system,—the first in the mock election at the Institute of Technology, and the second in the serious business of nominating candidates for Overseers for Harvard College,—by claiming for the preferential system of voting the following advantages:—

1. It protects the minority from the tyranny of the majority.
2. It protects the minorities and majorities alike from the tyranny of party chiefs.
3. It permits the utmost freedom of individual action.
4. It secures the most perfect co-operation and organization.
5. It gives every elector a representative after his own heart, whom he has actually helped to elect.
6. It gives every representative a constituency who are unanimous in his support.
7. It gives the representative a certain security in the tenure of his place.
8. It affords a natural and reasonable method of rotation in office.
9. It makes it for the interest of every party to put forward its best men.
10. It makes it worth while for good men to become candidates.

TALLY.	First count. Shakespeare elected. Shakespeare's surplus redistributed.	Second count. No election.	Seventy-six Scattering Votes redistributed.	Third count. Scott elected.	Milton's votes redistributed.	Bacon and Thackeray's votes redistributed.	Fourth count. No election.	Byron's votes redistributed.	Sixth count. No election.	Macaulay's votes redistributed.	Eighth count. Tennyson elected. Tennyson's surplus redistributed.
144 VOTES. Four to be Elected. Quota, 36.											
Bacon, Shakespeare, Scott, Byron, Burns, Macaulay, Tennyson, Thackeray, Dickens, Milton, —	I. 4 48 [12] 22 5 6 2 9 2 6 1 8 1 4 1 11 2 — 1	II. — 4 = 9 27 10 — 11 5 16 3 9 4 12 4 4 18 1 1 2	III. — 4 = 36 — 10 — 16 — 16 — 9 — 12 — 4 18 1 2 [2]	IV. — 4 [4] — 10 — 16 — 2 — 12 — 5 — 4 — 14 — 1	V. — 10 [10] — 10 — 16 — 2 — 17 — 4 — 15 — 1 — 1	VI. — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1	VII. — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1	VIII. — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1	IX. — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1		
Scattering, Lost, —	26 — 144	— — 26	[26] 2	2 1	8	— 8	— 3	— 3	1	4	— 4
	144	12	144	26	144	8	144	10	144	12	144
											2
											144

The ballots marked *Lost* are those which proved, on redistribution, not to contain the names of any of the remaining candidates.

11. It is equally efficient whether one candidate is to be chosen or a dozen.

12. It is available in the filling of vacancies as well as in general elections.

13. It is easy for the elector to cast his vote intelligently.

14. It is not difficult to count the votes with precision and promptness.

15. Hardly a ballot is ultimately thrown away.

16. Every ballot is assigned just as the voter who casts it desires.

No exception can be taken to several of the above-claimed advantages. So far as the system is considered as securing personal representation, it is most excellent. The freedom of action claimed as an advantage over other systems is not quite so apparent. In theory every voter is already entirely independent, and party chiefs sometimes find that he is so in fact as well. It cannot be denied that of all forms of minority representation it is the least wasteful, and that the larger the district the more exactly will the representatives be apportioned among parties according to their strength. Nor is there the least danger of voting for too many persons, as in the cumulative system. Indeed, votes can only be lost under Mr. Hare's system when they contain too few names.

But while this scheme avoids every evil of those which have been mentioned previously, it is open to some objections that do not apply to the others. It is impossible to speak of it as a simple system, if the voter is left altogether free to do as he pleases, while if he is under the control of party managers the system loses half its merit. Let us suppose that of the one hundred and forty-four voters in the example given, seventy-five were the partisans of the poets and sixty-nine of the novelists, the latter being under strict discipline and the former without organization. The "novelists" are all under instructions to vote a straight ticket, with Scott as first choice and Dickens as number two. Scott is elected on the first count, and thirty-three votes are passed over to the account of Dickens. The disorganized "poets" have scattered their votes among a dozen different candidates. The utmost they can do is to elect two poets with a surplus of three. Without any

previous understanding, it is possible that half the votes cast by the poet-lovers will be lost. It should be noticed that, in the example which is put forward as a fair test of the system, a large minority will obtain equality of representation, although the majority is equally well organized. If the majority numbers eighty-nine, it gets two representatives and a remainder of seventeen. The minority having one member and a remainder of nineteen for its fifty-five votes, the votes remaining to the majority are redistributed first as being the smaller number. Not containing the name of the minority candidate, they are lost, and the minority takes the fourth member.

It is impossible to maintain that this is a simple system. One might fancy the blank amazement of a free citizen of New York City, fresh from the naturalization-mill, and his perplexity on being told to fill out a ballot in accordance with his preference. Nor would it be necessary to go to New York or to South Carolina to find communities where not one in five of the legal voters could be made to comprehend the system. The only experiments thus far made are with exceptionally intelligent constituencies, voting upon a furnished official ballot with names suggested. Its remarkable success in those elections may be admitted, and yet be no indication of its applicability to our political system. Printed ballots might be prohibited in our present elections, and each voter compelled to prepare his own, with precisely the effect on his independence that the Hare system claims. Most of the voters might understand that requirement, but it would be absurd to expect a majority of the male citizens above twenty-one years of age to comprehend the Hare system if left to themselves. The result would be inevitable. Printed ballots all alike would be prepared and cast by the thousand, with an effect precisely similar to that of the Geneva free-list system, with a single improvement. Voters would not absolutely lose their votes by "scratching" portions of the ticket. The ring candidates would have nearly as great an advantage, because they would be placed at the head of the ticket and stand first in the order of preference of the blindly led voters. In all other respects the results of the two systems would be identical. Indeed, in choosing between the two systems, it is only a question whether we shall take

the simpler, which all can understand, or that which offers special opportunities to the more intelligent class, and excites the suspicion of those who are unable to comprehend all its complicated details.

The difficulties attending the Hare method are by no means ended when the polls are closed. The intelligent gentlemen who had to do with the nomination of Overseers of Harvard College found the counting of the ballots a task of no great difficulty, and yet a glance at the tally of less than two hundred votes and their redistribution, in the Institute of Technology, shows that it is a complicated matter, and far beyond the capacity of the average inspector of elections. It is true that the task is chiefly clerical, and proceeds according to well-defined rules, but the rules themselves involve too many processes to be intrusted to persons selected with so little regard to their fitness as inspectors usually are. It is suggested that the ordinary inspectors would have no more to do than to count the first names on the ballots, and then transmit the result and the ballots to a central bureau or board of general canvassers. One may fancy what a task would then remain to be done, if the voters had carried out the true intent of the Hare system and indicated individual preferences. If party organization had been retained, and party discipline enforced, the work could be done much more readily; but in that case the Hare system would have been reduced to the condition of a complicated form of the Geneva free list.

The opportunities for frauds in counting votes must not be overlooked. A partisan board of canvassers, who were also unscrupulous,—and this is not so much a supposititious case as we could wish,—would have almost unlimited opportunities for falsifying the records and awarding elections to members of their own party who stood far down on the list. In order to verify an election, not only the work of the general canvassers, but that of the local inspectors must be gone over, and in precisely the original order. For example, if there should be a dispute about the election of a certain member of Congress, declared to be chosen under the Hare method, every ballot cast for congressmen in the entire State of Massachusetts must be counted successively, and the same order as at first must be

observed both in the recount of precinct packages and in revising the work of the State canvassers. To suggest that there may be contested elections in consequence of illegal voting is, unhappily, not to draw too much on the imagination for objections to this system; and the problem of taking out the illegal votes, and stopping their influence at just the proper point, is enough to drive a mind of less than extraordinary fertility of resource to insanity.

It need not be said that the confusion incident to this system in an ordinary constituency would be enhanced by extending its operation. If it were to be applied to any election, it should be applied to the choice of all representative bodies. Accordingly, in November, 1872, the voters of Massachusetts might be called upon to cast the following ballots in separate boxes:—

1. For Electors of President and Vice-President;
2. For Governor and State and county officers;
3. For Senators;
4. For members of the House of Representatives;
5. For members of Congress.

Each of these ballots, except the second, must contain a score or two of names, each ballot-box must be watched and the order of votes noted, and separate counts must be made of every ballot. To suggest such an intricate machine for conducting an election is to condemn it. Better the tyranny of majorities than the tyranny of inspectors, over whose work supervision would be impossible, and its verification a task to drive those who attempted it into a madhouse. Better to bear the real injustice of our present system than to substitute for it another which would be unintelligible, and therefore unsatisfactory, to a great majority of electors.

We have reserved for the last one test of all the systems,—the filling of vacancies. On the death of a minority member, chosen under the limited vote or the cumulative vote, the matter must be remitted to the whole body of electors, and the majority would elect. However nearly the previous result had conformed to justice by the operation of either of these systems, the new election disarranges the proportions completely. The Hare system proposes two methods,—to pre-

serve the signed ballots which have been assigned to each member, and remit the question to the electors who cast them ; or to take the ballots and redistribute them as a surplus, together with the lost ballots. The first method is out of the question for two reasons : the practice of signing ballots is repugnant to our customs and tastes, and there would be almost insuperable obstacles in the way of obtaining a new expression from the extremely scattered constituency of the deceased candidate. The other method is more to the purpose. Mr. Ware exhibits the process in his letter to Mr. Eliot, already referred to, by an example. He supposes Shakespeare to have been withdrawn after the election, and he redistributes the votes with the four lost votes in this manner : —

	I.	II.	III.	IV.	V.	VI.
Bacon	4	—	4 [4]	—	—	—
Byron	11	1	12 2	14	14	18 [18]
Macaulay	9	1	10 2	12 4	16 6	22 12 34
Thackeray	6	1	7 —	7 [7]	—	—
Dickens	7	—	7 —	7 3	10 [10]	—
Scattering	3 [3]	—	—	—	—	—
Lost	—	—	—	—	—	6 6
	40	3	40	4	7	10
						40 18 40

This elects Macaulay as the successor of Shakespeare. With regard to this experiment Mr. Ware remarks that the result of it corresponded exactly with what was observed in a redistribution of the votes of a candidate for Overseer of Harvard College. He further contends that this experiment " shows, moreover, that, contrary to the generally received opinion, the system of preferential voting is applicable to the choice of a single candidate. In such case it enables the party of the minority to select between two candidates of the majority, preventing a mere majority of the majority from dictating the result." This may be true in some cases, but it will hardly do to be laid down as a rule. Supposing that the Republicans of Massachusetts nominate A for Governor, while a considerable section prefer B. The Democrats nominate C and prefer B to A. Forty thousand vote a ticket containing the name of A first, and B second ; thirty thousand vote the same ticket with

the order reversed ; and fifty thousand Democrats vote first for C, and place the name of B after it. The votes for B, being the lowest in number as the first choice, are redistributed and go to A, who thus has seventy thousand. C's votes follow ; as B is already a rejected candidate, the whole number of them are lost, and A is elected. Thus the minority not only has not the power to choose between two majority candidates, but a candidate who may be on every ticket as first or second choice is thrown out, and A, who was the first choice of only one third, and acceptable under any circumstances but to a bare majority, is elected, as he would have been under our present system. The free list here again steps to the front as the simplest plan yet devised in the filling of vacancies. The ticket on which was the name of the retiring candidate is a matter of record, and the first name of an unsuccessful candidate on that list is placed in the vacant seat.

A general summing up of the results of these several systems seems hardly necessary. Tried by the severe tests to which they must be subjected if adopted into our electoral system, they one and all fail in some important particular. That which is theoretically the most perfect attains its superiority by sacrificing simplicity. It will work admirably when the average human intellect is keener by many degrees than it now is ; but it is to be hoped that, before the arrival of that happy era, the spirit of injustice and selfishness, which causes the "tyranny of majorities," will have disappeared, and the necessity for so intricate a system will have disappeared along with it. The cumulative vote transfers the bludgeon from the hands of the majority to those of the minority. We should hear no more of the tyranny of majorities after its adoption, but we should feel very perceptibly the power of ambitious and tyrannical minorities. The limited vote does not secure an equitable representation of majorities and minorities. In place of our present system, giving all the representatives to one party in each district, it merely substitutes a rigid rule that the minority, however small, and the majority, however large, shall have a certain fixed proportion of representatives. To the free-list vote there can be but one objection ; it secures representation as nearly as possible in proportion to the num-

ber of voters, and it is as simple as possible, but it rivets the chains of party, and consolidates the power of party managers.

If compelled to decide between the four plans in a choice of a new political system, we must unhesitatingly prefer the free list, at least as a beginning. If it should appear, after trial, that the faults of the free list were those which a resort to the Hare system might obviate, the people would possibly, by that time, have become capable of adopting the slight modifications with the greater complications of that scheme. Party control of the electors is inevitable in a government constituted like ours. It is not altogether such an evil as it is commonly credited with being. Control by "rings," formed for purposes of plunder and office-getting, is wholly bad, but the subservience to it by the better class of citizens is simply the result of their indifference. It may be stated as a rule, to which there are no exceptions, that in any party the greater number are honest, and do not care for or belong to the "ring." It is only a question how long they will submit to irresponsible management by the worst men in their ranks. Any caucus fairly representing the party under whose auspices it is called will nominate a ticket which can receive the honest support of the whole party. The candidates will be true representatives of the principles held by the nominating caucus; and as no man has a claim to any office, the order of preference can be and would be arranged according to the ability, fitness, and integrity of the several nominees. This sounds utopian, it is true. But while we have little hope of an early return to good nominations through the caucus system, the Crawford county plan, or any other of the numerous suggestions of the day, we may at least maintain without question the proposition that with a reform in nominations the last objection to the free list is removed. A reform quite as much needed has already been suggested. The system of requiring representatives to be residents of districts, and of reducing districts to the smallest proportions, is a relic of that sort of local pride which was most offensive in the guise of the "State rights" doctrine. We ought to have outgrown it. It is founded on the false principle that the interest of one ward is

distinct from that of the city, of a State from that of the Union, and that there should be sectional representation. The principle is, however, deeply rooted in the public affections, and we cannot afford to wait for its eradication before we proceed to the other important amendment of our methods in the matter of nominations.

The great political problem of the day is, therefore, to pave the way for a change that is impending, by a reform in party management. Without that reform, the adoption of any new system of elections would be dangerous to the last degree. Cliques within parties are already too common, and they already have too great influence. We must not make them self-perpetuating and capable of further aggrandizement by means of either of the suggested plans. But if we can restore to the honest rank and file of the party the control of nominations, we strike at the root of the present evil. With candidates selected on the true principles, we are sure to have good government, whatever party wins. The urgency of the case is great. Specious theories of the justice of minority representation have become so wide-spread, that there is great danger of the people being driven to the adoption of one scheme or another in a totally unprepared state. It is the part of true conservatism as of true radicalism to bring about reforms in their natural and philosophical order. Our present political system is not wholly bad, although it has been greatly abused. It contains within itself all the elements of regeneration. It is absurd to clamor for a radical change in our methods of election, when nearly all the evils complained of arise from causes which are left untouched by any of the new methods proposed, which are rather aggravated by them. Rather let all our political philosophers turn their attention to the problem of inducing parties to put forward good and honest men, of emancipating them from the influence and control of rings, of educating the people to take an interest in primary elections, to insist on good nominations and to bolt relentlessly all that are bad, and we shall get good government without minority representation, or we can adopt a new system without danger.

EDWARD STANWOOD.

ART. II.—1. *Die Religion der Römer nach den Quellen*
dargestellt von J. A. HARTUNG. Erlangen: bei J. J. Palm
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THE “Mythology of the Greeks and Romans,” as it has heretofore been taught in our school-books and used as material in modern literature, is in truth neither Greek mythology nor Roman mythology, but an incongruous mixture of the two,—Grecian fable with Roman nomenclature. So long as it was purely a matter of fancy and of literary concern, there was no great harm done. Everybody understood what was meant by the Olympian Jove, the Eleusinian worship of Ceres, and the temple of Diana of the Ephesians, better indeed than if we had said Zeus, Demeter, and Artemis. But with the present century has come in a new school of philology, which has abandoned the merely literary treatment of such themes for one rigidly scientific, and which has discovered that names are not an indifferent matter in science; in fact, that, in such a field of inquiry as this, the name is often the key to the entire investigation. Max Müller, indeed, the leading authority in this new school, asserts “that mythology is simply a phase in the growth of language,” an assertion in which we may recognize an important truth under an exaggerated form of statement. Perhaps there was a little pedantry in the first zeal for calling the Greek divinities by their right names, but it was at bottom a genuine, if blind and pedantic, striving for scientific accuracy. And now that Comparative Mythology has come up as a science, we can see that one of its first and most essential requirements was to distinguish with precision between the religious systems of these two related peoples, and that the

first step towards this was to use names rightly. So long as Poseidon was called Neptune, and Ares Mars, the foundations of the new science could not be laid.

This first step has now been wellnigh accomplished. Very few persons of any pretension to scholarship insist any longer upon confounding together two independent sets of deities under common names. But while the Grecian gods have recovered their true names, and Grecian mythology has thus been placed upon a sound basis, the discarded Roman names have ceased to have a meaning to us. We know Zeus and Hera and Athena now; we have known them all our lives, it seems; but who are Jupiter, Juno, and Minerva? Roman mythology is hardly better known — at least among English and American scholars — than it was fifty years ago; that is to say, hardly at all.

When mythology was purely a matter of art and literature, so that, as remarked above, it mattered very little whether the god of fire was called Hephaistos or Vulcan, Roman mythology was also a matter of little consequence, for the reason that it afforded very little material for art and literature. Moreover it was not strange that the best scholars were almost wholly ignorant of it, for the reason that the facts with regard to it were so hard to get at, scattered in out-of-the-way authors, or hidden under a mass of irrelevant matter. The Roman poets for the most part do not give us Roman mythology, but Greek. Even Ovid, in his *Fasti*, — the only work of Roman literature which makes a pretence to embody the traditions of national mythology, — draws quite as much from Greek as from Roman sources; and it is often impossible to say, even where he appears to be giving us pure Roman legend, whether he is not, after all, making up a story. Thus the graceful story of Anna Perenna, in the third book, is evidently his own work, suggested by the identity of the name in the fourth book of the *Aeneid* with that of the Latin goddess; and all we get from this long episode, towards an understanding of the genuine Roman faith, is the description of the usages and habits of a popular festival, from which we may draw our own conclusions as to its origin.

In the scientific discussion of mythology, on the other hand,

Italian traditions are of the first importance. Indeed, it may be doubted whether their scientific value is not enhanced by the fact that they were not subjected to the distorting and transforming influences of poetry. Hartung, in his *Religion der Griechen*, points out that the original and genuine traditions of Greek religion are to be sought, not in the poets, but rather in such works as the Itinerary of Pausanias. The poets and artists took the crude myth and moulded and modified it to serve their purposes; Pausanias dryly describes institutions and usages of immemorial antiquity, and from these we can learn what the *people* actually believed and how they worshipped. Now our authorities for Roman mythology are mostly of this character. It was for the most part let alone by the poets, save in the single instance of Ovid's *Fasti*, a work which is of priceless value in this investigation, for the reason that it gives us just what Pausanias does, a description of forms and customs. What it contains more than this may be of service and may not; at any rate, it needs to be sifted; but these descriptions are genuine. Next to Ovid's *Fasti*, in our materials for this study, will perhaps come Augustine's *De Civitate Dei*, which contains a summary of the views of Varro, the most learned Roman antiquarian, introduced by the Christian writer for the purpose of being refuted. Besides these we have little more than scraps and fragments. Varro's treatise *De Lingua Latina* is partly preserved, and is of the highest value, so far as it goes. Of Verrius Flaccus, the next antiquarian in merit, we have a portion of an abridgment by Festus, in a terribly corrupt and mutilated condition, and an abridgment of Festus by Paulus Diaconus. The commentary of Servius upon Virgil comes next in order; he was not himself an antiquarian of the rank of Varro and Verrius, but he copied many a curious bit of information into his hotchpotch of a commentary. So did Aulus Gellius too, whose *Noctes Atticae* may indeed rank above the commentary of Servius. Besides these, we have some late writers, like Macrobius, a few allusions and statements in that poet of genuine learning, Virgil, in Cicero and the elder Pliny, and not a few inscriptions of value.

These materials, it will be seen, are, after all, not so very scanty; it is a question whether we are not, in some respects,

better informed as to the original religious institutions of the Romans than as to those of the Greeks. Neither is this material altogether so dry and unedifying as might be supposed ; nor is the Roman mythology wholly destitute of stories of love and adventure, such as those in which the Greek mythology abounds. Many of their gods were married ; Mars and Nerio, Neptune and Salacia, Saturn and Ops, were faithful pairs. The pleasant story in Ovid (Met. XIV. 623), how Vertumnus sought the love of the shy Pomona ; how, changing his form,— he was the counterpart of Proteus,— he appeared successively as a reaper, a mower, a vine-pruner, a soldier, etc., and then as an old woman, who lectured and warned the maiden, finally in his own youthful form, and won his bride : this story and numbers like it may be dressed up by the poet, but can hardly have been wholly invented by him.

Nevertheless, it must be confessed that stories like this are not characteristic features of the Roman religion ; that it did not encourage flights of the imagination, but was serious and earnest, running to observance and ceremonial rather than to fable. It was remarked by an eminent German scholar that the Romans had no mythology, only sacred antiquities (*gottesdienstliche Alterthümer*),— an assertion which has enough truth in it to serve as a general description. This expresses the most fundamental distinction between the Greek and Roman religious systems ; but it will be interesting, and indeed essential to our discussion, to inquire in what further particulars they differed from each other ; that is, what different development the two related nations gave to the same original faith.

In a previous article * I described this original faith, common to the ancestors of both Greeks and Romans, as starting in “ the immanence of the divine power, inhabiting, inspiring, and vivifying every living thing, nay, every inanimate object, and every action of life ; a sort of pantheism,— a belief, not in one God pervading all nature and identified with nature, but in millions of gods, a god for every object, for every act.” Pandemonism, Preller calls it. In anthropomorphizing, or investing these divinities with personality and human shape and

* *North American Review*, for July, 1869.

attributes, consisted the development from fetichism to polytheism ; and it is the special excellence and glory of the Greeks that this anthropomorphism was so complete, and that the Greek Olympus contains no man-bulls or cat-headed monsters by the side of the perfectly human Zeus, Apollo, and Aphrodite. The Centaurs and Minotaurs of Greek mythology were few in number and of subordinate importance.

The Romans lacked the high æsthetic sense which preserved the Greeks from the puerile bestialities of Oriental mythologies. On the other hand, they had their own protective in an even higher and nobler quality. Their conservative and practical temper led them to cling to that primitive mode of regarding the divine power which the Greeks lost sight of in the individuality of their deities. The Greeks, out of the original *numina*, or *δαιμόνες*, had created their marvellous Olympus of living gods and goddesses, — their ideal of perfect humanity. The Romans, on the other hand, were capable of only a very moderate degree of anthropomorphism. Their gods were persons, it is true, but they were not, as a whole, invested with any very marked human attributes ; and it was found easier to keep up the habit of imputing individual acts to distinct deities, than to extend the sphere of activity of the gods they already had. Hence the multitudinousness of their pantheon. No other nation, perhaps, would have conceived of a special divine spirit, existing merely for the purpose of causing Hannibal to turn his back on Rome when already in sight of the city. The Romans indeed might have given the credit of it to Jupiter or Mars, and invested him with a new attribute and built him a new temple ; instead of that, they chose to build a shrine, on the spot which Hannibal last occupied, to the *Deus Rediculus*, the god who caused the turning about. But the most remarkable illustrations of this practice are found in the *Indumenta*, or books of religious formulas, and other remnants of the old worship. Every act of life had its peculiar divinity, to be invoked in its proper time and place. There were some sixty or seventy of these, who presided over the growth of the human body alone, — *Vagitanus*, who opened the mouth of the infant for his first cry ; *Cunina*, who guarded the cradle ; *Educa*, who taught the infant to eat ; *Potina*, who taught him to drink ;

Ossipago, who knit the bones, etc. Then for husbandry, there were *Nodutus*, who caused the joints of the stalks to grow; *Volutina*, who wrapped them in their leaf-sheaths; *Patelina*, who opened the wrappings, that the ear might come out in due season; *Hostilina*, who made the crop even in its ears; down to *Runcina*, who presided over the pulling of the roots from the ground. These were not strictly gods, even in the polytheistic sense of the word, but *numina*, or attendant spirits.

But above all,—and this is the source of what is purest and noblest in the Roman religion,—they delighted in recognizing the divinity that inspired every virtuous thought and act,—the worship of abstract qualities. It was a necessary accompaniment of this characteristic, that harmful spirits and vicious qualities should also be recognized and worshipped; but it is a remarkable and honorable fact, that the Romans were never led astray by this to an overweening service of evil deities. They propitiated *Vejovis*, the bad Jove, and *Febris*, Fever, and *Mephitis*, Malaria; but there was no devil-worship or service of *Moloch*: so far from it, indeed, that they did not even feel sure who *Vejovis* was, although they regularly sacrificed to him. (Ov., *Fasti*, III. 435, ff.) The Romans had an unwavering faith that the powers of good were superior to those of evil. This worship of abstractions went probably far beyond that of any other mythological system, and is the most striking and characteristic feature of the Roman theology. Other mythologies possess it in a degree; the Athenians built temples to Unwinged Victory and to Health. But the Romans, besides *Victoria* and *Salus*, had *Honor*, *Pudicitia*, *Fortune*, *Pax*, *Libertas*, and *Concordia* among their most honored deities. Indeed, several of those gods who rank as personalities were abstractions at the outset. *Minerva* was the abstraction of mental power (*mens*), *Mercury* the abstraction of traffic (*merx*), *Janus* the god of opening (*janua*), and *Saturn* the god of sowing (*satus*).

On the other hand, while the Romans went far beyond the Greeks in the worship of abstractions, they lost, in a much greater degree, the worship of elementary spirits, which had been in reality the starting-point of each theology. *Ouranos*, *Gaia*, *Okeanos*, were reverenced by the side of *Zeus*, *Demeter*,

and Poseidon ; but the Romans had only the personal gods, Jupiter and Neptune, Bona Dea and Dea Dia, while Tellus (rather than Terra) did not hold a high rank in their worship. This fact illustrates the different development of the two peoples. Both started with the worship of elementary spirits ; in both the spirit of the firmament, Zeus or Jupiter, naturally took the first rank, and other spirits, of water, fire, earth, etc., were personified by his side. Then when these had become completely anthropomorphized, and their origin was forgotten, while their power was reverenced, the imaginative Greeks repeated the same process, and created new deities of earth, sky, and water by the side of the old ; while the practical Romans turned themselves to the contemplation of the human virtues, or provided for the whole range of human sentiments and actions, by regarding each of them as produced and controlled by an indwelling spirit.

The Romans again, aside from what passed as history, lacked the demigods and heroes, who make so large a part of the Greek system, and who, one would think, would be peculiarly congenial to the Roman temper of mind. And, as a matter of fact, this proved to be the case ; for among the earliest Greek deities whose worship was engrafted upon the Roman tradition were demigods like Hercules and the Dioscuri, heroes like *Aeneas* and *Evander*. Almost the only native Italian deity who is reckoned among the heroes is *Semo Sancus*, or *Dius Fidius*, who had two or three temples at Rome, and who was frequently identified with Hercules, for no other apparent reason than that both were commonly adjured in oaths, — *me hercule, me dius fidius*. But why the god whose very name, *Fidius*, implies that he was the spirit of faith, and of whom not a single legend is narrated, — who is as purely an abstraction as *Concordia* or *Spes*, — should be called a *hero*, it is at first sight hard to see. His second name means nearly the same as his first ; *semo* is *spirit*, *sancus* is usually connected etymologically with *sanctus*, *holy*. But *Sancus* or *Sangus* was really an object of tradition, being the alleged founder of the Sabine nationality ; and it was natural, perhaps, that he should be identified with this favorite of Greek tradition, Hercules, whose name and worship were spread far and wide along the

Mediterranean. Just as he was identified with the Sabine Sancus, his name superseded that of the Latin Recarenus, the slayer of Cacus in the original legend ; and in the East he was adopted by the Phœnicians as their god Melkarth under another name.

This conservative temper, which, as we have seen, was the source of what was best in the Roman religion, by keeping alive the faith in the immanence of the divine power, had, however, its weak side, and was equally the source of the worst peculiar feature of this worship, that is, its excessive formality. All Roman history illustrates this. The service is vitiated, and the games must be renewed, says Cicero (Har. Res. XI. 23), “if the pantomimist makes a sudden pause, or the flute-player interrupts his blowing, or the boy stumbles or loses hold of the chariot, or lets the reins fall, or if the presiding edile makes a slip of the tongue or a false motion with the cup of libation” ; cases were known in which the same rites must be begun over again fifty times before they were accomplished in due form. Or take the formalities required in the case of the *Flamen Dialis*, or priest of Jupiter, next the *Rex Sacrificulus* the highest priest in the hierarchy. (Aul. Gell. X. 15.) In the first place he must be of pure patrician birth, of parents married by the ancient patrician ceremony of *confarreatio* ; he himself must have married a virgin by the same ceremony, and his wife bore the title of *Flaminica*. He must not ride a horse, nor look upon a marshalled army outside the *pomærium* (that is, except when it entered the city in a triumphal procession), nor take an oath, nor wear a solid ring, nor a knot in any part of his clothing. His hair must not be cut except by a free man, and the cuttings of both hair and nails must be buried under a tree of good omen. He must not touch nor even name a goat, uncooked meat, ivy, or beans, nor must he touch dough when fermenting. A bound prisoner brought into his house must be set free, and the chains removed, not by the door, but by the *impluvium*, or opening in the roof. So if a person who is to be scourged falls as a suppliant at his feet, the scourging must be remitted for that day. He must not touch a dead body, nor take part in a funeral, nor enter a tomb. He must not strip his body, except under a roof.

The legs of his bed must be smeared about with mud, and he must never be away from it three nights together.

Unquestionably all these points had a meaning and an object once, and are simply an illustration of forms kept up with strictness long after they had lost their vitality. What is peculiar to the Romans is the multiplicity of them, and the painful precision with which the smallest details were insisted upon. The religion of the Greeks and Romans consisted, as Zumpt has pointed out, not in doctrine, like that of the Hebrews and Persians, but in faith and ceremonial, and its very life depended upon maintaining the forms pure and unimpaired.

Now that we have discussed the great distinctive features of the Roman religion, let us proceed to consider some special classes of religious ideas, which will best illustrate the character of their faith and worship and the points of resemblance and contrast with those of the Greeks. We shall then be prepared to glance at their religious system as a whole,—their theogony and Olympus, if we could use these words for so jejune a creation,—and to trace the history of their religious ideas and forms of worship.

It has been said that the primitive Roman worship was directed to the divine spirit dwelling in an object or inspiring an action or process of nature,—the thought that lies at the foundation of fetich worship. We meet indeed with not a few real fetiches in the developed worship of the city. Of this nature were the plants sacred to the several gods,—the oak of Jupiter, the myrtle of Venus, the “*sacer Fauno foliis oleaster amaris*” (Virg. *Aen.* XII. 766); and the animals sacrificed to them,—the boar to Mars, the cow to Diana, the sow to Ceres. Such was the sacred fire in which the divinity of Vesta was conceived to reside. So with the *ficus ruminalis*, under which Romulus and Remus had been found in infancy, and which was believed to have been afterwards conveyed to the *comitium* by divine power. Still better examples are the flint-stone kept in the temple of Jupiter and used in oaths (*per Jovem lapidem* was a common oath. Cic. *ad Fam.* VII. 12); the *lapis manalis*, kept by the temple of Mars, and carried through the city when rain was needed; best of all the lance (or lances) of Mars, kept with the sacred shields in the *Regia*.

It was a most portentous omen when this lance moved of its own accord, and one to be consulted upon by the highest powers of the state. When war was declared, the commander entered the sacred building, struck the shields and then the spear, crying out, *Mars, vigila!* “Mars, awake!” Neither is the principle of that form of fetich wanting which has received the name of *totem*, — a fetich appropriated to a tribe and transmitted by hereditary descent, as is found especially among the North American Indians. At least among the cognate Italian tribes we recognize the Hirpinians as receiving their name from the wolf (*hirpus*) of Mars, and the Picenians from the wood-pecker (*picus*) of Mars, which had guided them to their new homes. The Hirpi Sorani, or wolves of Soranus, will be mentioned presently.

There are some traces among the Romans of that serpent-worship which plays so important a part in some religious systems. The *genius*, or indwelling spirit of the man, appears under the form of a serpent, as is illustrated by the occurrence when *Æneas* sacrificed at his father's tomb (*Æn.* V. 84). Propertius (IV. 8) describes an oracle at Lanuvium, to which the seekers approached down a dark opening, and fed hungry serpents with the hand. If the maiden is chaste, she returns in safety, and the husbandmen joyfully shout that the year will be a fruitful one. Of wilful indecencies the Italian religion was, in its original forms, almost absolutely free, although many such grew up in after time.

Fairies and elves, the graceful creation of Northern mythologies, were foreign to the notions of the Greeks and Romans. The Greeks made up for this with a wonderful abundance and variety of nymphs and other beings, completely human in bodily aspect, and with no magic powers, but the living embodiment of the simple powers of nature. The Roman equivalent for the nymphs were the *Viræ* or *Vires*. These were joined with Diana in the worship at the Nemean sanctuary, but are otherwise a wholly shadowy existence to us, not even having made their way into poetry; their name, however, has been developed into the better known *virgo* and *virago*. The companion male beings, on the other hand, the fauns and *silvani*, are better known, and represent for us not merely the Greek

satyrs, but the weird creatures of Northern mythology. Faunus, "the favorer," is the old god of nature, a chief personage in the earliest mythology. As having the ear to the secrets of nature, he is a prophetic god ; as the father of the Italian theogony, he was transformed into an early king. In his whole nature he corresponds very closely with the Greek Pan, and, like him, was multiplied, in the popular conception, into a class. The name, therefore, which at first was that of the chief god of nature, was afterwards applied to the lesser gods of the wood and field, corresponding in this sense to the Greek satyrs. The same is true of Silvanus, always an inferior being to Faunus. The *fauni* and *silvani*, then, were often playful or malicious beings, like the dwarfs, alps, and scrattles of German fairy-land. To protect against their pranks, the children wore the *bulla* and other amulets. Especially was Silvanus to be dreaded after the birth of a child ; and mother and infant were protected by three deities, Intercidona with an axe, Pilumnus with a mortar, and Deverra with a broom, to personate whom three men went about the house at night with axe, mortar, and broom, cutting, pounding, and sweeping the thresholds. There were also the vampire *strigæ*, who sucked the blood of infants in the cradle. Against these Carna or Cranea, the goddess of the hinge, was invoked, who touched the threshold and door-posts with a bough of arbute, sprinkled the doorway with charmed water, and threw out the entrails of a young pig, saying " Birds of the night, spare the vitals of the child ; a little victim is slain for the little one. Take this heart for his heart, I pray, this flesh for his. We give you this life for a better one." Then she puts in the window a twig of white thorn, the plant sacred to Carna, and the child is safe.

The Romans did not originally incline to *mysteries*, such as those of Eleusis, Samothrace, Imbros, and Crete, in which the Greek religion abounded. Leaving out of consideration the rites of Cybele, Bacchus, and others, which were purely exotic, and of late introduction, there were still, however, a few native mysteries very early in origin and very widely reverenced. There were secret rites to Angerona, in the temple of Volupia, — in allusion, says Hartung, to the anguish which is

turned to rapture. The best known, however, and most important are those of Bona Dea, the *good goddess*, whose very name is a mystery, although she has been identified with Fauna, Ops, and others. It is probable that she represented the fructifying powers of the earth, and her festival was on the first day of the month of *increase* (Maius), whence also she was called Maia. Her mysteries, however, were celebrated in December, in the house of the highest magistrate, by women alone, and appear in later times to have acquired a wild and orgiastic character. The sacrilege by which Clodius managed to witness these rites, and the uproar it made in the state, can only be compared to the famous mutilation of the statues at Athens. It is too familiar an event to need more detailed mention ; neither need we conclude that the fearful picture drawn by Juvenal of the license of these rites is even approximately true for the times of the Republic.

Although mysterious rites did not much abound among the Italians, yet there were several *mysteries*, that is, secrets,—the secret name of the city of Rome, which was concealed in order that no enemy, by learning it, could call forth (*evocare*) its protecting deities ; and those of several classes of gods, to guess which a great deal of learning and ingenuity has been expended. We may safely conclude that what was a secret then will be a secret now. And in reference to such classes Preller says (p. 549) : “ In general it must be assumed that all gods of lesser rank which were conceived as pure spirits (*dämonenartig*), and for this very reason were named and invoked only as classes, originally had no personal names, either in Greece or Italy.” It will be worth while, however, to examine a little more in detail points which are so characteristic of Roman modes of thought.

The *Dii Consentes* and *Dii Involuti* appear to belong rather to the system of the Etruscans, who were peculiarly fond of dark and sombre articles of faith. And yet it appears clearly from Varro, that the Consentes had temples in Rome (L. L. VIII. 71), and that their statues, twelve in number,—six male and six female,—stood on the Forum. They might, therefore, be identified with the Twelve Olympian Gods ; but we are expressly told that their names were unknown, and we

must bear in mind that this idea of twelve chief gods is Greek, not Roman. The list of them, given by Ennius,—

Vesta, Minerva, Ceres, Juno, Diana, Venus, Mars,
Mercurius, Jovi', Neptunus, Vulcanus, Apollo,—

includes several, as will be shown presently, who are essentially foreign deities. On the whole, it seems most rational to assume that there was really no secret here. The Dii Consentes were the council of Jove, having no individuality, and therefore no names of their own. The Involuti are conjectured by Gerhard to be represented in an Etruscan relief, as two partially veiled figures, sitting back to back, with the backs of their hands placed before their mouths. We shall not probably be wrong in identifying them, as Gerhard does,* with the Fates, as a council higher than that of the Consentes. The Etruscans taught (Seneca, *Nat. Qu.* II. 41) that Jove hurls his first thunderbolt alone, to inspire terror; the second, which hurts but heals, by the advice of the twelve gods (the Consentes, no doubt); the third, which blasts and destroys, *adhibitis in consilium dis, quos superiores et involutos vocant.*

The names of the *Penates* were also a secret, both those of the city, and especially the *great gods* worshipped at Lavinium, which Æneas was supposed to have brought with him. But the word is of pure Latin derivation, and it is not likely that the alleged connection with Troy or Samothrace was anything but a theory, started when the Greeks and Romans came into contact with each other along the coast, like the whole story of the colonization of Æneas, and the stories of Evander, Hercules, Sancus, Catillus, etc. Very likely the Penates of Rome were the secret gods of the city, connected with its secret name. Another much disputed name is that of the Dii Indigetes, generally rendered the *native gods*, a rendering which is correct as far as it goes. It is applied to such characters as Æneas and Cæculus, the native heroes, ἐγχώριος, of Lavinium and Præneste respectively. But it appears to imply something more than nativity, or even divinity; it carries with it the conception of the spirit or *numen* — the *genius* — that dwells in the place and the people, — a connection almost as close as that of father of the race.

* Über die Gottheiten der Etrusken, Anm. 17.

A still more puzzling class are the *Novensiles* or *Novensides*. In the formula of invocation used by Decius when about to devote himself (Liv. VIII. 9) they are mentioned: “Jane, Jupiter, Mars pater, Quirine, Bellona, Lares, divi novensiles, di indigetes, divi quorum est potestas nostrorum hostiumque, diique manes, etc.” These are all deities either of high rank, or peculiarly Roman, or specially connected with the act of self-devotion. Janus was invoked first, as on all occasions; then the three great national gods Jupiter, Mars, and Quirinus; then the goddess of war, the deified ancestors, the heroes, the shades. From the position of the novensiles, by the side of the indigetes, these have been supposed to mean respectively the native gods and those which were originally foreign, thus deriving the word from *novus*, new; this is Hartung’s view, and was held by the ancient writer Cincius. Varro and Piso, however, say that they were Sabine gods, and the name has been found on inscriptions in the Sabine country. It seems more natural, therefore, to derive the name from *novem*, nine, and to consider them a special group of deities introduced from the Sabines, whose functions had some natural connection with the act of devotion. It does not seem likely that these two terms would be used on this occasion in order to include all existing deities, especially after so peculiar a list has been enumerated as that given; and at any rate it would be strange that we have no other instance of the use of *novensiles* and *indigetes* in this distributive sense. May it not be doubted also whether the native, *indigetes*, would not have stood first in this case? I am inclined, on the whole, to the view of Manilius, that they were the nine gods who, according to the Etruscans, had the power of hurling the thunderbolt,—a meaning quite appropriate to their occurrence in a formula of devotion.

In nothing were the Romans more distinguished from the Greeks than in the mode of seeking the will of the gods. They had no Apollo, whose frenzied hierophants uttered oracles under a divine afflatus. But the formal auspices which the magistrates consulted, and which were interpreted by the college of augurs, were among the most characteristic of the institutions of the state. Everything was simple and definite, and reduced to rigid rules. It was not all birds, at all times,

that conveyed the will of the gods, but only certain ones, when the magistrate consulted them with well-defined ceremonies. It was to him only that the auspices were sent ; the augur was but the skilled interpreter who was called in to explain phenomena, but who had no power himself to seek for the signs. This resulted from the fundamental principle that the state rested upon the divine will, as declared in the auspices. The auspices belonged to the citizens as a body, that is, to the patricians ; the chief magistrate for the time being had them in his possession ; but whenever there was a vacancy, the auspices, the embodiment of sovereignty, returned to the patrician body, where they remained until a new magistrate, installed with the consent of the gods, was again the depositary of them.

The Roman or patrician auspices, thus carefully and jealously maintained, were, however, but the specially Roman development of the Italian system of augury. The plebeians had their auspices likewise, and the other Italian nations, different from the Roman, but no doubt analogous. They observed, for instance, different birds, and gave a different interpretation to the same sign. Individuals, too, could interpret for themselves the signs that came in their path, and there were many other methods of ascertaining the future besides the flight of birds, the appearance of animals, and the path of the thunder-bolt. Another public oracle, the Sibylline Books, must not be forgotten ; but it will be treated of in another place. The haruspices, a low class of Etruscan soothsayers, who foretold by consulting the entrails of animals sacrificed, must be carefully distinguished from the augurs, who were a body of statesmen and gentlemen of the highest rank. The serpent oracle at Lanuvium has already been spoken of. Faunus, the good god of nature, was wont to whisper his secrets in dreams, or call them out to his worshippers, as is described in the seventh book of the *Aeneid* (v. 81). Sanctuaries of Fortuna were likewise frequented for this purpose. The most famous was at Præneste, where lots were drawn from a box. It has been surmised that the elegantly engraved boxes, peculiar to Prænestine art, were in some way connected with this oracle. Another was at Antium, celebrated by Horace in the thirty-fifth ode of the first book, — *O diva gratum quæ regis Antium.* Of the superstitions of the later Republic and the Empire I shall speak presently.

From the general religious conceptions we will pass to the consideration of the special objects of Roman worship, and the changes in their religious institutions and ideas. Probably there is no nation which illustrates the transformations of faith so well as the Romans: first, because in their case these transformations were very extensive and remarkable; secondly, because we are unusually well informed in regard to them, and can trace them with great distinctness and accuracy.

The primitive religion of the Romans consisted of two elements,—that which they inherited from their remote ancestry and possessed in common with other Aryan peoples, and that which was developed for itself by the Italian race after its separation from the Greeks. To the first class, besides the general conceptions which have already been spoken of, belonged the worship of Jupiter (*Ζεὺς πατήρ*), Juno (*Διώνη*), and Vesta (*'Εστία*), and perhaps nothing more. Even here the Romans had hardly more than the names in common with the Greeks; the conceptions and forms of worship were wholly their own. The other class, that of distinctively Italian deities, forms a peculiarly interesting group, one which is, however, not always easy to analyze. Many of these, whose worship was of great importance and popularity in the earliest times, were afterwards forgotten or cast in the shade by Greek and other foreign divinities. For instance, it may fairly be claimed that any god who had a *flamen*, or special priest, held a tolerable rank at one time, although it would not necessarily follow that he had the highest rank. Now we do not possess the complete list of flamens, but we know that besides the three of chief rank,—those of Jupiter, Mars, and Quirinus,—and those of Vulcan, Flora, and Pomona, the gods of fire, flowers, and fruits, there were flamens of the river god (Volturnus), the harbor god (Portunus), the goddess of the Palatine, the original seat of the city (Palatua), of Carmentis, a goddess of spells and song, and of Furina and Falacer pater, whose functions are not known. It was in the sacred grove of Furina, not of the furies, that Gaius Gracchus was killed; Falacer pater is connected by Hartung with the Etruscan word *falandum*, heaven, as being therefore only another name or another form of Jupiter. This is all that is known, or conjectured, about these

two deities ; but it is a fair inference that all these, even those who were quite insignificant or actually forgotten in after time, were leading gods in early ages.

Besides these gods who dwindled or vanished in historical times, there were not a few who were insignificant at first, and acquired high importance afterwards by being identified with leading Greek deities (as Venus, Ceres, and Mercury), or whose attributes were entirely altered in this identification (as Liber pater and Saturn). For Saturn was originally only the god of sowing, and he had nothing in common with the Greek Kronos, except the tradition of great antiquity. It was related that he had reigned in the most distant periods of time, before Jupiter was known ; but no original Italian myth made him the father of Jupiter.

Jupiter, as the god of the heavens, was the chief god in early as in later times ; and the vine, which depends so much upon the weather for its fruitfulness, was under his special charge. Bacchus was only a late importation from Greece, and Liber pater, with whom he was in after times identified, had originally nothing to do with the vine or with drunkenness, but, with Libera, presided over the bearing of children. But if Jupiter was recognized as the greatest of all gods, Mars was the favorite object of worship, the national god, not only of the Romans, but of the Italian race as a whole ; just as a Catholic people, without impugning the supremacy of Jehovah, will take St. James or St. Denis as its special patron and protector, and the object of its dearest affections.

Mars, therefore, although the god of killing, was hardly the *special* god of war in early times. This character was merged and lost out of sight in that of the national god of a nation of shepherds and husbandmen ; and he was “ pre-eminently regarded as the divine champion of the burgesses, hurling the spear, protecting the flocks, and overthrowing the foe.” (Mommsen, Book I. ch. 12.) Bellona, on the other hand, was the special impersonation of war. Mars, in this point of view, was grouped with Faunus, Picus, Silvanus, Pales, and other deities of nature ; while as civic god of the old Roman city upon the Palatium, he was associated with Quirinus, his duplicate, the Mars of the hill city upon the Quirinal.

Jupiter, then, the chief god of all, with Mars and Quirinus, the patron deities of the two cities, on the Palatine and the Quirinal, which were united together to form Rome, were the great triumvirate of early times. By the side of these there were worshipped Faunus, the good god of nature (in February), Terminus, of boundaries (also in February), Ceres, the goddess of growth, and Pales, of the flocks (in April), Neptune, of the sea (in July), Consus (from *condo*) and Ops, of the harvest (in August), Vulcan, of fire (in August), and Saturn, of sowing (in December). Add to these Janus, the god of opening, and Vesta, the goddess of the hearth, and we have, with the omission of some less important names, the original Roman pantheon. What is most striking in this is the number of purely Latin names of great importance in after times, which are wanting. At this time Juno was perhaps nothing but the *numen* of women, the counterpart of the male *genius*; Minerva was only an *indigitamentum*, of memory; Diana, a leading Latin goddess, was hardly recognized in Rome; Venus was of quite subordinate importance; and Mercury was hardly known, if at all.

The changes made in after time in the objects of worship may be referred to three heads,—Italian influence, Greek influence, and Oriental influence. For although the Romans were themselves a pure Italian people, and possessed those elements of faith which were common to the Italian race, yet each community, like Rome itself, had its special rites and divinities, many of which were, one after another, adopted by the Romans. Etruria has the credit of having supplied the Romans with many articles of faith; but the more is known of its people, the more barren its institutions appear. The Capitoline trio, Jupiter, Juno, and Minerva, whose worship marks the Tarquinian dynasty, is often referred to Etruria; but Varro expressly tells us (L. L. V. 158) that they had a chapel upon the “Old Capitol” (on the Quirinal) earlier than that upon the Capitoline. At any rate we have seen that Juno was a primitive Græco-Italian goddess, and was certainly known before this time, at least as the indwelling spirit of women. Minerva, too, is a purely Latin name (*mens*), and her worship was specially in the hands of the Nautian gens,

which was of Alban origin. Varro (L. L. V. 74) reckons her among the Sabine deities. It seems impossible, therefore, to say what religious movement was connected with the establishment of this trio. But whatever it may have been, these three, from this time, appear at the head of the Roman Olympus. The political bearing of the fact is suggested by Marquardt's theory (Vol. V. p. 47), that this new institution was to form a religious centre for the now united state, corresponding with the important constitutional changes that took place at this epoch. As the patrician city had its Jupiter, Mars, and Quirinus, the plebeians had the temple of Diana on the Aventine. It was the work of the Tarquinian dynasty to unite these two elements into one ; and with this work the founding of the new temple and worship may have been connected. At any rate, it is at this period that both temples were founded, — that of Diana and that of the Capitoline Jove. To this period belongs, likewise, the commencement of the custom of having images of the gods, according to Varro's statement (Aug. Civ. Dei. IV. 31) that the Romans worshipped the gods one hundred and seventy years without images.

As to Diana herself, it is hard to determine her precise character, further than that she seems to have been a feminine form of Janus (Dianus). She had a renowned sanctuary at the Lake of Nemi, near Aricia, and it was probably from the similarity of her worship here to that of the Tauric Artemis that it came about that Diana was identified with Artemis. The *Rex Nemorensis*, or priest of Diana, held his place by the sword, — by killing his predecessor in single combat ; and he must maintain it in the same way, — an exploit which none but runaway slaves undertook in later times.

When the power of Rome grew, and she came to absorb all her neighbors into herself, many other local deities were incorporated into the Roman system. The Penates at Lavinium and Fortuna at Præneste and Antium have been already spoken of. The Sibyl Albunea at Tibur, and the Dioscuri at Tusculum, belong rather to a later period. One of the most important of this class was Juno Sospita Mater Regina, who had a famous sanctuary at Lanuvium and lesser ones at Rome ; it was in her temple that the serpent oracle described above

was found. This goddess has perhaps more reality to us than most of her class, from her mention in Cicero's oration against Milo, and from her peculiar statue in the Vatican, with shield and spear, clad in a goat-skin, with pointed shoes, and a serpent at her feet.

Still another was the worship of Soranus on Mount Soracte, who, as a god of light, worshipped on the top of the mountain, was identified with Apollo, — *Sancti custos Soractis Apollo* (Virg. *Aen.* XI. 785). But he was also identified with *Dis Pater*, god of the lower world, by reason of a sulphurous vapor which exhaled from a hole in the mountain-side, and of the peculiar rites with which he was worshipped, partly described by Virgil in the passage cited. For once when the service was going on, wolves came and snatched the flesh of the sacrifices ; and when the shepherds pursued, they were led to this cave, where the sulphurous exhalations were so strong as to kill those who came nearest. Then, as a punishment for pursuing the sacred animals, a pestilence broke out, which, as an oracle told them, could only be checked by the people themselves becoming wolves (Serv. *Aen.* xi. 785). From this they were called *Hirpini* (from *hirpus*, a wolf), just as the *Hirpinian Samnites* had received their name from following the guidance of a wolf when they went off to find a new home. The wolf ceremony was, like the Roman Lupercalia (also from *lupus*, a wolf), a purifying one ; they ran naked and unhurt through blazing fire at their annual festival. This rite is described by Strabo (V. 226) as occurring at the grove of *Feronia*, at the foot of the mountain, and there was undoubtedly a close connection in this place between the two divinities. But Soranus was merely a local deity, the god of the mountain Soracte, while *Feronia* was one of the most widely reverenced goddesses, whose worship is traced in many parts of Italy, from Verona in the North to Latium in the South, and the *Vestinians* in the East. She seems to have been a goddess of nature, like *Flora*, but in some way came to be especially connected with popular traffic. Her three principal groves — at Soracte, at *Anxur* or *Tarracina* (*ora manusque tua larimus, Feronia, lympha*, Hor. *Sat.* I. 5, 24), and at *Trebulum Mutuesca* — were all famous for the throng of traffickers from all

parts who gathered there ; they were genuine fairs, where pedlers and showmen resorted as they do nowadays to cattle-shows and camp-meetings. It was a disturbance at one of these fairs that led to the war of Tullus Hostilius with the Sabines (Liv. I. 30).

It would be interesting to describe some others of the primitive rites of the Romans, connected with their original character as a farming and pasturing people ; such as the worship of Dea Dia in May by the Arval Brothers, one of the oldest and most illustrious of the patrician sodalities, and which was kept up long into the Empire. Many inscriptions, illustrating their usages, have been discovered at their sanctuary, five miles from the city, where they still continue to be found from time to time. Then there was the procession to the grove of Rubigo (rust) in April, at which the Flamen of Quirinus offered the prayer recorded by Ovid (Fast. IV. 911), " Harsh Rubigo, spare the growth of Ceres, and let the smooth top tremble above the ground. Let the crops, nourished by the favoring heavens, grow until they are ready for the sickle." The worship of the Lares and Manes, too, would throw much light upon the religious notions of the people ; the *genius*, or indwelling spirit of the man, took its place after death among the *Manes* ; the deified ancestors were *Lares*, while the spirits of the impious flitted from place to place, tormenting the wicked, and themselves finding no rest ; these were *Larvæ* and *Lemures*. The word *Lares* came to have a rather wide compass ; and we find that Alexander Severus had images in his chapel, (*clararium*) of Abraham, Christ, Apollonius of Tyana, Orpheus and others, besides his ancestors. (Æl. Lamp. Alex. Sev. 29.) But we must hasten on to the later developments of the Roman faith.

The first great change wrought by foreign influence was in the direction of the Greek, partly in introducing new deities, partly in modifying the conceptions of the old. It was really a revolution to invest Jupiter, Mars, Minerva, and Neptune with the attributes of Zeus, Ares, Athene, and Poseidon, and to foist the whole Greek mythology, with its ideality and sensuousness, upon the dry, earnest, pure theology of the Romans. Cicero and Cato did not believe that their gods had ever done

the acts that were ascribed to them ; in the time of Camillus nobody could have believed it, because these were so wholly at variance with the national mode of thought. The influence that came from the later intercourse with Greece was not a legitimate and salutary one. It was not Sophocles or Socrates, not even Homer or Praxiteles, that introduced Grecian thought to the Romans ; it was the dregs of philosophy,—not divine philosophy,—the fancies and sensualities of art, when its spirit had disappeared,—not the imaginative reason,—that came in to help corrupt a people that was going to ruin fast enough by itself.

This, however, belongs to a later stage of Greek influence. The early Greek influence was good, or at all events not bad. For some three hundred years we watch a succession of new gods and goddesses borrowed from Greece. In some cases they were plainly foreign deities, and the name as well as the religion is new. In others some Roman divinity was found, often of wholly subordinate rank, and raised at once to importance and dignity by being clothed with all the attributes and associations of some one of the twelve great gods of Greece. To the first class belong Apollo, Hercules, Castor and Pollux, and *Æsculapius* ; these are in every respect foreign, although Apollo was identified with Soranus, and Hercules's shoulders were made to bear all the heroic traditions that had sprung up on Italian soil. There ~~are~~ as many of the second class. Diana has already been spoken of, and her resemblance to Artemis is enough to explain the identification of the two, especially in the fact that the Latin nymphs, the *Viræ*, were peculiarly connected with her. Mercury again, originally hardly more than an *indigitamentum*, or impersonation of the act of traffic, became Hermes, the messenger of the gods, the contriver, the god of eloquence, the conductor of the souls of the dead, merely by virtue of the one function that the two had in common. Venus, the abstraction of sensuous pleasure, and at the same time (in these simple rural days) a goddess of the garden, in the same way became Aphrodite.

Still more important is the case of Ceres. She has been shown to have been one of the original nature-deities of the Romans, but her worship was simple and public. Whatever

sentiments of mystery were connected with the observation of nature were embodied in the worship of Bona Dea and perhaps Dea Dia and Dis pater (the god of the lower world). It was to one of these, then, that the Greek mysteries of Demeter, Dionysos, and Kore should have been attached. Instead of that, Ceres was taken, joined with Liber and Libera (an utterly incongruous combination), and made the centre of a new worship, purely Greek, and conducted by Grecian priests, while at the same time the old festival of Ceres was kept up by the side of the new. The original Latin Ceres was now wholly overshadowed and obscured by her new functions as Demeter; so that she appears from this time on as an essentially Greek divinity. The name of Proserpine, the goddess of the Indigitamenta, who causes the young plant to creep forth from the ground, has so close a resemblance to Persephone, the daughter of Demeter, that she too was made into a Grecian goddess, and joined with Pluto as queen of the lower world.

It is Marquardt's view that all these elements of Greek religion were introduced by method, and as part of a system, of which the Sibylline books were the authority, the *Quindecimviri sacris faciundis* the managers; that is, that the purchase of the Sibylline books marks distinctly a new era in the Roman religion, and that the two systems went on side by side, — the Pontifices at the head of the native system, the Quindecimviri of the foreign. It is certain that the Sibylline books were of Greek origin, and that in most cases of the introduction of Greek rites it is explicitly stated that it was done by the direction of these books. One feature of the new system was the *lectisternia*, or festivals at which the statues of the gods were placed on couches at tables spread with a banquet.

The Greek forms of worship mentioned above were all established at Rome before the Second Punic War. Although they were essentially foreign, and in some cases in the hands of foreign priests, yet there was nothing in them (apart from the myths) really inconsistent with Roman ideas, and they were kept well in control by the authorities of the state. With the Second Punic War, when that baleful Greek influence described above began to be powerfully felt, commences a new series of foreign rites of a new character, attended by the most

disastrous consequences. In the case of Apollo, Diana, Ceres, *Æsculapius*, and even *Venus*, there had been new ceremonies and at worst mysteries ; with the arrival of *Cybele*, the Great Mother, begins a period of orgies and debasing superstitions. The circumstances attending the introduction of this worship are too well known to need repetition ; but it cannot be made too plain, what a contrast this frenzied Oriental worship, with its bloody symbolism, its begging priests, its wild dances, and its trumpets and cymbals, made to the old Roman and even the earlier Greek rites. We can well understand how suspiciously these narrow-minded but clear-sighted senators must have stood aloof from it. But this was only a beginning. Soon after followed the rites of *Bacchus*, private in origin and celebration, even more wild, orgiastic, and indecent. The Senate did its best to check the growth of these practices, but it was too late. Already the simple, pure, formal, strictly national religion of Rome was dead, and there was nothing for it but superstitions and philosophies.

In saying that the Roman religion gave way to superstition and philosophy, it must be remarked that this was a natural transformation, and in certain aspects a salutary one. The nature-religion of the Greeks and Romans was in its essence capable of only a very limited development ; that of the Romans was peculiarly narrow and inelastic. It was essentially a state religion, well adapted, in its formality and strictness, to a people whose whole individuality was merged in that of the state. And whatever elements of worship were popular and spontaneous in their origin and character were pure outgrowths of that simple, unimaginative observation of nature and deification of its powers, which were natural to the Italian people. As the character of the nation developed, its religion was transformed by successive stages. The first of these has already been traced. It is connected with the sway of the Tarquinian dynasty, when Rome first became conscious of her destiny, and from being a single Latin city assumed the dignity of a state. This individual member of the Latin confederacy is now found not merely in possession of the hegemony in Latium, but in a relation of equal alliance on the one side with this confederacy on the other. At this same time the political institutions

expanded, and the patriarchal patrician organization began to be superseded by the principle of territorial nationality. With this political revolution there was naturally connected a religious one, which has been already described as consisting in the establishment of the supreme Capitoline triad, and in the introduction of Greek rites and forms of faith, through the Sibylline books. Now these changes, it must be remembered, were not at all hostile to Roman nationality. They were, in truth, an expansion of it. The purity of the nationality was no ways impaired, but went on manifesting itself with more and more vigor for centuries. Whatever the Romans borrowed at this time either remained completely exotic, under the charge of Greek priests, or was completely assimilated, so as to become an integral part of the Roman faith.

With the Punic Wars comes in a new stage of growth, when the Roman people ceased to be purely Roman and became cosmopolitan. The change was one in capacity as well as in modes of thought. The early Roman had no needs or aspirations which his native religion could not satisfy. His calm, rigid spirit was not disturbed by doubts and anxieties as to the future, or tormented by the perplexing problems of older states of society, or attracted by the enthusiasms and orgiastic rites of more excitable peoples. With the conquest of the world all this was changed. It was partly that new elements of population flowed from all quarters into the capital of the world, partly that the Romans themselves had a wider field of view opened before them, and were more powerfully influenced by the thoughts and usages with which they were brought in contact. With their old narrowness and formalism they lost, it is true, their old simplicity and purity, but they gained in insight and impressibility. Matthew Arnold speaks of the pagans of this time as "people who seem never made to be serious, never made to be sick or sorry." But this view is one-sided. They were sick and sorry, they did feel those longings and aspirations which are so characteristic of modern times; and these puerile, fanatical, and often disgusting superstitions, which mark the downfall of the ancient faith, are only the indications of a demand for, and a seeking after, something higher and better.

The old Roman religion could not satisfy the new needs and longings of this new Roman people, because it had neither elasticity nor sympathetic power. It fell short as well of the intellectual demands of the time. It was abandoned, therefore, both by the masses, who were ready to believe, but needed some more vital faith, and by the cultivated, who had ceased to believe. The one class had recourse to superstitions, the other to philosophies. Three schools of philosophy gained a strong foothold among the cultivated classes of Romans,—the Epicurean, with those who rejected all intervention of the gods in human affairs, the Stoic, with the more earnest and devout believers in a divine providence; while the Academic school afforded intellectual discipline and interest to those who thought the whole subject beyond the scope of our intelligence. With the Epicureans associated itself all that was contaminating and destructive to morals and society; the Stoics quickly identified themselves with whatever survived that was noble and heroic, and we owe to them some of the most striking examples of devoted patriotism and disinterested virtue that history contains. To this period belongs Euhemerism, that school of philosophizing which considered the gods to be nothing but deified men.

With all this the established religion fell into neglect. It is true that much of it preserved a certain popularity and respect by becoming identified with Greek fable. The Greek mythology satisfied some of the new longings of the community,—those which were repelled by the formality and sterility of the old worship; and some of the Roman gods, invested with new attributes, and made the heroes of adventures and exploits that their early worshippers never dreamed of, were still the objects of reverence. But whatever was distinctly Roman rapidly disappeared, with the exception of rites which, like the Lupercalia and the festival of Bona Dea, were in a degree fitted to satisfy the new needs. Names of gods were forgotten, temples fell into decay; consecrated places were filled with rubbish and filth, the most honored priesthoods were left vacant, holy times were neglected, and sacred observances were despised. Even Cato the Censor wondered that one haruspex could look another in the face without laughing; but this belonged to the

age, not to Rome alone ; for Hannibal indignantly asked King Prusias, when he refused to fight, because the sacrifices were not favorable, whether he would rather put trust in a bit of veal than in an experienced commander. Cæsar indeed does not appear once in his whole career to have consulted the sacrifices.

With the Empire came in a temporary reaction. Augustus, conservative in all things, was especially so in religion, and from him dates a restoration of the old temples and a more zealous observance of the old rites. So far as the state was concerned, the decay of the Roman faith was arrested. At the same time the new *régime* was inaugurated by new observances, significantly connected with the Empire and the Julian dynasty. Sacrifices were offered thrice in the year to Peace, temples erected to Mars Ultor (the avenger of Julius), and Venus Genitrix (the mother of the race) ; and Augustus even aimed to make Apollo, rather than Mars, the special deity of his city.

Meantime, while the old religion was neglected, and the higher classes were sedulously cultivating philosophy, the masses had taken refuge in Oriental superstitions. As the earlier epoch, that of the Tarquins, had received its character from Greece, this later one was influenced by Asia,—the early source of religious inspiration to the Greeks, as well as the cradle of the later Christianity. It is not necessary wholly to despise the frantic rites of Cybele, or even those of Bacchus. They were perverted, as emotional religious observances are always in danger of being,—as were those of Bona Dea herself,—to an instrument of corruption and licentiousness. But unquestionably at their introduction they did satisfy a human want for which the hereditary religion made no provision. If Catholicism finds its purest expression in the ecstasies of St. Francis, if the most successful Protestant denominations stimulate the wild excitements of revivals and camp-meetings, we need not criticise the ancients too severely that they fed their religious cravings with fanaticisms, many of which differed from those of modern times rather in the object of the worship than in the forms and spirit. It was the best they could do. I am not concerned here to speak of the abominations to which they led,—no more revolting than were attrib-

uted to the religious organization of the Knights Templars, or than are known of the Anabaptists of Münster. I care rather for what is true in these superstitions than for what is false.

In a religious aspect we are already at the transition period which divides the ancient pagan world from the modern Christian world. The Greek and the Roman religion had each run its course, and Asia was now called in to contribute the vital element which they lacked. The worship of Cybele, of Isis and Sarapis, and of Mithras, attempted to give to humanity, although in an ignoble and distorted form, precisely those truths which Christianity brought home to the heart of men, — immortality, and the unity of the godhead. And if Christendom borrowed some of her most sacred institutions from the earliest Roman forms, if the Roman Catholic ritual and ceremonial are in many respects only the ancient Roman ones over again, and the festivals of the Church have many of them come straight down from republican times, yet these are but matters of form. In more essential spiritual points we find a frequent parallelism between the accepted doctrines of Christianity and that mixture of Roman and Oriental religion which had sway in the later Republic and the early Empire.

In the article upon the religion of the Greeks, already referred to, I pointed out the connection of the myths of Persephone, Adonis, and Osiris with the death of the year, and its revivification in spring, and showed how these myths became the symbol and expression of the idea of immortality. The Romans had hardly anything in their primitive religion which could be made use of for this purpose ; or, rather, it would be more correct to say, they did not possess the creative imagination which would develop their simple ideas into a sympathetic faith. Even when they introduced from Greece the combined worship of Ceres, Liber, and Libera, and the Eleusinian mysteries along with it, it was left wholly to Greek priests, and would appear to have soon become wholly formal and lifeless. The worship of Cybele, introduced at the time of the Second Punic War, assumed a more popular and enthusiastic character, although even this failed to be fully developed until the time of the Empire, when the rites of the “Great Mother” became still more orgiastic, and were made the expression of a lively

religious enthusiasm. In its essential features the new March festival of the Great Mother bore many resemblances to Easter. It was at just the same time of the year, when the day at last gets victory over the night, and the new spring rises to life from its long sleep. The festival lasted several days, chief among them being one of mourning and fasting, to which followed, on the 25th of March, a day of joy, when the dead Attis was raised to life from the grave.

The same idea was expressed in the Egyptian religion of Isis, which was one of the most popular in Rome at the time of the Christian era. The death of Osiris at the hands of his enemy Typhon was like the abduction of Persephone by the god of the lower world ; the sad search by Isis for her lost husband was that of Demeter for her daughter ; and when the lost one was found at last, the worshippers broke out in shouts of joy, “ We have found him ; we rejoice with thee ! ” In this Egyptian myth, as transformed by the Alexandrian Greeks, Osiris became Sarapis, who lived on as king of the lower world, — a somewhat different phase of the belief in immortality from that which is seen in the worship of Cybele. In the worship of Isis we mark for the first time a tendency to give personality and a name to that supreme deity, *ὁ τὸν ὄλον κόσμον συντάττων*, whom so many philosophers and thinkers had already recognized. “ Thou, goddess Isis, who alone art all things,” says an inscription ; and her enthusiastic votaries claimed for this goddess that she was in truth the supreme divinity.

We must not make the mistake, however, of recognizing in a supreme divinity such as this the strict idea of one God, like the Jewish Jehovah. Polytheism does not differ from monotheism in the accident of number alone, but in the very conception of the divine nature. By *deus* the Romans meant only a supernatural being, who could help or harm men, and who might be an object of reverence ; what we understand by a *spirit*. Thus the spirits of the departed were *dii manes* ; that is, when the *genius*, or indwelling spirit of a man, passed from his body, it became a god. Primarily there is no necessary inequality among these spirits, only a difference of function ; and it was the greater or less importance and extent of these functions, or the accident of local worship, that gave one god

a higher position in rank and power than another. Thus Jupiter, the god of the sky, whose powers had so wide a sway, and whose sphere embraced that of all others, naturally became the chief god, both with Greeks and Romans ; while Mars, from the accident of his being the special god of the Italian race, held a much higher position than his Greek counterpart Ares. But Jupiter was only the strongest of the gods ; he was not God, in the monotheistic view. When the Greek and Roman philosophers spoke of a divine power which was really supreme in the universe, they rarely called it Zeus or Jupiter, but Fate, or Necessity, or simply God.

On the other hand, Monotheism is not at all incompatible with a multitude of divine beings, such as the Romans would have called *dei*. The Jews had their angels, the Catholic Church has its saints, even Protestants hold fast to the existence of angels, devils, ghosts, and witches. “The difference between monotheism and polytheism,” says Hartung, “lies noways in the number of supernatural beings, but in the relation of this plurality to the unity ; in the former necessity has given way to freedom, in the latter freedom is confined under necessity” ; that is, “the heathen gods have necessity over them, not in them ; under it they act after their wills, endowed with like conditions but higher powers than men,” so that Jupiter was only the first among equals.

The symbolism of the myth of Isis and Osiris — the same as that of Demeter and Persephone, Cybele and Attis, Aphrodite and Adonis — is the deepest and tenderest in the whole range of mythology ; and the truth of immortality expressed in it is one of the dearest to the human heart. Probably there was something in the Egyptian costume and ritual that took a peculiar hold of whatever was sensitive in the Roman people, and at any rate this worship seemed to them to embody all the results of the centuries of Egyptian wisdom and learning. However that may be, it was the popular religion in the early Empire, and Isis and her husband — under his new name Sarapis — not unnaturally gathered about them most of the enthusiastic and sympathetic elements of faith. With him were identified all the highest attributes of deity, with her all the womanly qualities, like the Virgin Mary in the Catholic sys-

tem ; their devotees went so far as to claim that all the chief gods and goddesses of various nations — those who might themselves have been called the sole God — were only these under other names and in a different form. This was not pure monotheism, but rather an effort to raise one out of the pantheon to a higher rank than the rest, by removing his rivals. On the other hand, it was a step towards monotheism, and satisfied the monotheistic cravings, so far as they consciously existed at that time. It has been already said that this was a transitional period, when beliefs were being transformed, and rites from all parts of the earth were brought together and compared. In consistency with this, the conception of a chief god was no longer the polytheistic one ; at the same time it was not yet clearly monotheistic.

The dynasty of the Severi, which formed so important an epoch in the political development of the Empire, was an almost equally important one in religious matters. It marks a new irruption of Asiatic superstitions, chiefly embodied in the worship of the Sun, under his Syrian name Elagabalus and the Persian name Mithras. With the Unconquerable Sun, *Sol Invictus*, was associated a still higher form of the growing monotheistic conception than that of Isis and Sarapis. The worship of Mithras, with its strange and bloody symbolism, and its claims to represent the unity of the godhead, was zealously prosecuted even after Christianity had become the state religion. Heathenism, in its expiring form, assumed all the attributes and claims of the victorious faith which it could, and thus for a while held its ground against it. To this period belong especially the fastings, expiations, and cleansing rites which form a link between the pagan religion and mediæval Christianity. The most striking of them was the *Taurobolion*, or baptism in the blood of a bull (other animals were also used), which was connected especially with the March festival of the Magna Mater. It was a striking illustration, however, of the growing unity of faith, that this ceremony was not peculiar to any one worship, but was associated with all the forms of orgiastic religion of the time.

Lastly, a word must be said upon the worship of the Emperor. This has been a strange puzzle to many moderns, but

was in reality not merely a direct outgrowth of the ancient religious conceptions, but a very striking and immediate link between them and those of the modern world. It was not the man Augustus or Trajan that was worshipped, but the divine spirit, the *genius*, which dwelt in them and inspired the great actions of their life. If this *genius* became a god at the death of the poorest and meanest, and was added to the *dii manes*, how much more in the case of great and beneficent sovereigns ? The apotheosis of an emperor after his death, even the worship of his *genius* during his life, was neither irrational nor illogical, when once we understand the ancient conception of the divine nature. That the same honors were bestowed upon a Nero and Caracalla may have been fear or flattery ; it was, at any rate, an outgrowth of the same mode of thought. But we need not go to the ancients for an analogy. The modern world is perfectly familiar with the spectacle of a man of ordinary powers and passions invested, by the election of a body of men, with a peculiar holiness and sanctity, so that it is conceived that when he speaks it is God that speaks through him. No one believes that it is in the man Gregory or Leo that this divinity consists, but that in some way a divine nature has been added to his human nature, by a direct and special act of the Almighty. Now the Pope is as much a god, in the eyes of his followers, as a Roman Emperor ever was ; that is, not at all, according to the modern definition of the word *god*. The appointment to the imperial dignity was, on the average, hardly more irregular, in respect to fraud, violence, and corruption, than that to the Papacy during a great part of its history ; and any one who believes that John XII. and Alexander VI. were clothed with these holy attributes and powers, by virtue of the post they held as Christ's vicegerent on earth, need not find any difficulty in seeing how the Roman people could believe that Caligula and Commodus were invested with a similar sanctity by virtue of holding a post which in that time and for that people was the highest and most important that could be conceived of.

My aim in this paper has been, first, to point out the essential and distinctive features of the primitive religion of the Romans, and to show how important its study is in the com-

parative view of religions; secondly, to show that its overthrow in the later Republic was a necessary development, and that the superstitions which took its place were not merely the best and only substitute they had, but did actually satisfy some of the most earnest cravings of the human heart. The corruptions they underwent were quite as much the result as the cause of the corruptions of society.

Of the works whose titles are placed at the head of the article, that of Preller is, on the whole, the most complete and satisfactory for the use of the student. Hartung is a writer of more originality, and far more suggestive and instructive for the philosophy of the subject. Zumpt's little treatise contains some excellent points, but it was a popular address, and makes no pretensions to fulness. Marquardt's work is admirably clear and copious in citation, like all his writings; but it is partial, being purely the antiquities of worship, rather than the religious system as such. Preller's treatise, being later than Hartung's and more extensive, contains material which Hartung has passed over; so that, while quite inferior in insight and suggestiveness, it is superior in arrangement and completeness.

WILLIAM F. ALLEN.

ART. III.—1. *Contributions to the Theory of Natural Selection.* By ALFRED RUSSEL WALLACE. London and New York: Macmillan & Co. 1870. 8vo. pp. 384.

2. *On the Genesis of Species.* By ST. GEORGE MIVART, F. R. S. London and New York: Macmillan & Co. 1871. 8vo. pp. 314.

3. *The Descent of Man, and Selection in Relation to Sex.* By CHARLES DARWIN, M. A., F. R. S., etc. In two volumes. New York: D. Appleton & Co. 1871. 8vo. pp. 409 and 436.

4. *On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life.* By CHARLES DARWIN, M. A., F. R. S., etc. Fifth Edition, with Additions and Corrections. New York: D. Appleton & Co. 1871. 8vo. pp. 447.

IT is now nearly twelve years since the discussion of that “mystery of mysteries,” the origin of species, was reopened by the publication of the first edition of Mr. Darwin’s most remarkable work. Again and again in the history of scientific debate this question had been discussed, and, after exciting a short-lived interest, had been condemned by cautious and conservative thinkers to the limbo of insoluble problems or to the realm of religious mystery. They had, therefore, sufficient grounds, *a priori*, for anticipating that a similar fate would attend this new revival of the question, and that, in a few years, no more would be heard of the matter; that the same condemnation awaited this movement which had overwhelmed the venturesome speculations of Lamarck and of the author of the “*Vestiges of Creation*.” This not unnatural anticipation has been, however, most signally disappointed. Every year has increased the interest felt in the question, and at the present moment the list of publications which we place at the head of this article testifies to the firm hold which the subject has acquired in this short period on the speculative interests of all inquisitive minds. But what can we say has really been accomplished by this debate; and what reasons have we for believing that the judgment of conservative thinkers will not,

in the main, be proved right after all, though present indications are against them? One permanent consequence, at least, will remain, in the great additions to our knowledge of natural history, and of general physiology, or theoretical biology, which the discussion has produced; though the greater part of this positive contribution to science is still to be credited directly to Mr. Darwin's works, and even to his original researches. But, besides this, an advantage has been gained which cannot be too highly estimated. Orthodoxy has been won over to the doctrine of evolution. In asserting this result, however, we are obliged to make what will appear to many persons important qualifications and explanations. We do not mean that the heads of leading religious bodies, even in the most enlightened communities, are yet willing to withdraw the dogma that the origin of species is a special religious mystery, or even to assent to the hypothesis of evolution as a legitimate question for scientific inquiry. We mean only, that many eminent students of science, who claim to be orthodox, and who are certainly actuated as much by a spirit of reverence as by scientific inquisitiveness, have found means of reconciling the general doctrine of evolution with the dogmas they regard as essential to religion. Even to those whose interest in the question is mainly scientific this result is a welcome one, as opening the way for a freer discussion of subordinate questions, less trammeled by the religious prejudices which have so often been serious obstacles to the progress of scientific researches.

But again, in congratulating ourselves on this result, we are obliged to limit it to the doctrine of evolution in its most general form, the theory common to Lamarck's zoölogical philosophy, to the views of the author of the "Vestiges of Creation," to the general conclusions of Mr. Darwin's and Mr. Wallace's theory of Natural Selection, to Mr. Spencer's general doctrine of evolution, and to a number of minor explanations of the processes by which races of animals and plants have been derived by descent from different ancestral forms. What is no longer regarded with suspicion as secretly hostile to religious beliefs by many truly religious thinkers is that which is denoted in common by the various names "transmutation," "development," "derivation," "evolution," and "descent with modifi-

cation." These terms are synonymous in their primary and general signification, but refer secondarily to various hypotheses of the processes of derivation. But there is a choice among them on historical grounds, and with reference to associations, which are of some importance from a theological point of view. "Transmutation" and "development" are under ban. "Derivation" is, perhaps, the most innocent word; though "evolution" will probably prevail, since, spite of its etymological implication, it has lately become most acceptable, not only to the theological critics of the theory, but to its scientific advocates; although, from the neutral ground of experimental science, "descent with modification" is the most pertinent and least exceptionable name.

While the general doctrine of evolution has thus been successfully redeemed from theological condemnation, this is not yet true of the subordinate hypothesis of Natural Selection, to the partial success of which this change of opinion is, in great measure, due. It is, at first sight, a paradox that the views most peculiar to the eminent naturalist, whose work has been chiefly instrumental in effecting this change of opinion, should still be rejected or regarded with suspicion by those who have nevertheless been led by him to adopt the general hypothesis, — an hypothesis which his explanations have done so much to render credible. It would seem, at first sight, that Mr. Darwin has won a victory, not for himself, but for Lamarck. Transmutation, it would seem, has been accepted, but Natural Selection, its explanation, is still rejected by many converts to the general theory, both on religious and scientific grounds. But too much weight might easily be attributed to the deductive or explanatory part of the evidence, on which the doctrine of evolution has come to rest. In the half-century preceding the publication of the "Origin of Species," inductive evidence on the subject has accumulated, greatly outweighing all that was previously known; and the "Origin of Species" is not less remarkable as a compend and discussion of this evidence than for the ingenuity of its explanations. It is not, therefore, to what is now known as "Darwinism" that the prevalence of the doctrine of evolution is to be attributed, or only indirectly. Still, most of this effect is due to Mr. Darwin's work, and some-

thing undoubtedly to the indirect influence of reasonings that are regarded with distrust by those who accept their conclusions ; for opinions are contagious, even where their reasons are resisted.

The most effective general criticism of the theory of Natural Selection which has yet appeared, or one which, at least, is likely to exert the greatest influence in overcoming the remaining prejudice against the general doctrine of evolution, is the work of Mr. St. George Mivart "On the Genesis of Species." Though, as we shall show in the course of this article, the work falls far short of what we might have expected from an author of Mr. Mivart's attainments as a naturalist, yet his position before the religious world, and his unquestionable familiarity with the theological bearings of his subject, will undoubtedly gain for him and for the doctrine of evolution a hearing and a credit, which the mere student of science might be denied. His work is mainly a critique of "Darwinism" ; that is, of the theories peculiar to Mr. Darwin and the "Darwinians," as distinguished from the believers in the general doctrine of evolution which our author accepts. He also puts forward an hypothesis in opposition to Mr. Darwin's doctrine of the predominant influence of Natural Selection in the generation of organic species, and their relation to the conditions of their existence. On this hypothesis, called "Specific Genesis," an organism, though at any one time a fixed and determinate species, approximately adapted to surrounding conditions of existence, is potentially, and by innate potential combinations of organs and faculties, adapted to many other conditions of existence. It passes, according to the hypothesis, from one form to another of specific "manifestation," abruptly and discontinuously in conformity to the emergencies of its outward life ; but in any condition to which it is tolerably adapted it retains a stable form, subject to variation only within determinate limits, like oscillations in a stable equilibrium. For this conception our author is indebted to Mr. Galton, who, in his work on "Hereditary Genius," "compares the development of species with a many-faceted spheroid tumbling over from one facet or stable equilibrium to another. The existence of internal conditions in animals," Mr. Mivart adds (p. 111), "corresponding with such facets is

denied by pure Darwinians, but it is contended in this work that something may also be said for their existence." There are many facts of variation, numerous cases of abrupt changes in individuals both of natural and domesticated species, which, of course, no Darwinian or physiologist denies, and of which Natural Selection professes to offer no direct explanation. The causes of these phenomena, and their relations to external conditions of existence, are matters quite independent of the principle of Natural Selection, except so far as they may directly affect the animal's or plant's well-being, with the origin of which this principle is alone concerned. General physiology has classified some of these sudden variations under such names as "reversion" and "atavism," or returns more or less complete to ancestral forms. Others have been connected together under the law of "correlated or concomitant variations," changes that, when they take place, though not known to be physically dependent on each other, yet usually or often occur together. Some cases of this law have been referred to the higher, more fundamental laws of homological variations, or variations occurring together on account of the relationships of homology, or due to similarities and physical relations between parts of organisms, in tissues, organic connections, and modes of growth. Other variations are explained by the laws and causes that determine monstrous growths. Others again are quite inexplicable as yet, or cannot yet be referred to any general law or any known antecedents. These comprise, indeed, the most common cases. The almost universal prevalence of well-marked phenomena of variation in species, the absolutely universal fact that no two individual organisms are exactly alike, and that the description of a species is necessarily abstract and in many respects by means of averages,—these facts have received no particular explanations, and might indeed be taken as ultimate facts or highest laws in themselves, were it not that in biological speculations such an assumption would be likely to be misunderstood, as denying the existence of any real determining causes and more ultimate laws, as well as denying any known antecedents or regularities in such phenomena. No physical naturalist would for a moment be liable to such a misunderstanding, but would, on the contrary, be more likely to be off

his guard against the possibility of it in minds otherwise trained and habituated to a different kind of studies. Mr. Darwin has undoubtedly erred in this respect. He has not in his works repeated with sufficient frequency his faith in the universality of the law of causation, in the phenomena of general physiology or theoretical biology, as well as in all the rest of physical nature. He has not said often enough, it would appear, that in referring any effect to "accident," he only means that its causes are like particular phases of the weather, or like innumerable phenomena in the concrete course of nature generally, which are quite beyond the power of finite minds to anticipate or to account for in detail, though none the less really determinate or due to regular causes. That he has committed this error appears from the fact that his critic, Mr. Mivart, has made the mistake, which nullifies nearly the whole of his criticism, of supposing that "the theory of Natural Selection may (though it need not) be taken in such a way as to lead men to regard the present organic world as formed, so to speak, *accidentally*, beautiful and wonderful as is confessedly the hap-hazard result" (p. 33). Mr. Mivart, like many another writer, seems to forget the age of the world in which he lives and for which he writes,—the age of "experimental philosophy," the very stand-point of which, its fundamental assumption, is the universality of physical causation. This is so familiar to minds bred in physical studies, that they rarely imagine that they may be mistaken for disciples of Democritus, or for believers in "the fortuitous concourse of atoms," in the sense, at least, which theology has attached to this phrase. If they assent to the truth that may have been meant by the phrase, they would not for a moment suppose that the atoms move fortuitously, but only that their conjunctions, constituting the actual concrete orders of events, could not be anticipated except by a knowledge of the natures and regular histories of each and all of them,—such knowledge as belongs only to omniscience. The very hope of experimental philosophy, its expectation of constructing the sciences into a true philosophy of nature, is based on the induction, or, if you please, the *a priori* presumption, that physical causation is universal; that the constitution of nature is written in its actual manifestations,

and needs only to be deciphered by experimental and inductive research ; that it is not a latent invisible writing, to be brought out by the magic of mental anticipation or metaphysical meditation. Or, as Bacon said, it is not by the " anticipations of the mind," but by the " interpretation of nature," that natural philosophy is to be constituted ; and this is to presume that the order of nature is decipherable, or that causation is everywhere either manifest or hidden, but never absent.

Mr. Mivart does not wholly reject the process of Natural Selection, or disallow it as a real cause in nature, but he reduces it to " a subordinate rôle " in his view of the derivation of species. It serves to perfect the imperfect adaptations and to meet within certain limits unfavorable changes in the conditions of existence. The " accidents " which Natural Selection acts upon are allowed to serve in a subordinate capacity and in subjection to a foreordained, particular, divine order, or to act like other agencies dependent on an evil principle, which are compelled to turn evil into good. Indeed, the only difference on purely scientific grounds, and irrespective of theological considerations, between Mr. Mivart's views and Mr. Darwin's is in regard to the *extent* to which the process of Natural Selection has been effective in the modifications of species. Mr. Darwin himself, from the very nature of the process, has never supposed for it, as a cause, any other than a co-ordinate place among other causes of change, though he attributes to it a superintendent, directive, and controlling agency among them. The student of the theory would gather quite a different impression of the theory from Mr. Mivart's account of it, which attributes to " Darwinians " the absurd conception of this cause as acting " alone " to produce the changes and stabilities of species ; whereas, from the very nature of the process, other causes of change, whether of a known or as yet unknown nature, are presupposed by it. Even Mr. Galton's and our author's hypothetical " facets," or internal conditions of abrupt changes and successions of stable equilibriums, might be among these causes, if there were any good inductive grounds for supposing their existence. Reversional and correlated variations are, indeed, due to such internal conditions and to laws of inheritance, which have been ascertained inductively as at least laws of

phenomena, but of which the causes, or the antecedent conditions in the organism, are unknown. Mr. Darwin continually refers to variations as arising from unknown causes, but these are always such, so far as observation can determine their relations to the organism's conditions of existence, that they are far from accounting for, or bearing any relations to, the adaptive characters of the organism. It is solely upon and with reference to such adaptive characters that the process of Natural Selection has any agency, or could be supposed to be effective. If Mr. Mivart had cited anywhere in his book, as he has not, even a single instance of sudden variation in a whole race, either in a state of nature or under domestication, which is not referable by known physiological laws to the past history of the race on the theory of evolution, and had further shown that such a variation was an adaptive one, he might have weakened the arguments for the agency and extent of the process of Natural Selection. As it is, he has left them quite intact.

The only direct proofs which he adduces for his theory that adaptive as well as other combinations proceed from innate pre-determinations wholly within the organism, are drawn from, or rather assumed in, a supposed analogy of the specific forms in organisms to those of crystals. As under different circumstances or in different media the same chemical substances or constituent substances assume different and distinct crystalline forms, so, he supposes, organisms are distinct manifestations of typical forms, one after another of which will appear under various external conditions. He quotes from Mr. J. J. Murphy, "Habit and Intelligence," that, "it needs no proof that in the case of spheres and crystals, the forms and structures are the effect and not the cause of the formative principle. Attraction, whether gravitational or capillary, produces the spherical form; the spherical form does not produce attraction. And crystalline polarities produce crystalline structure and form; crystalline structure and form do not produce polarities." And, by analogy, Mr. Murphy and our author infer that innate vital forces always produce specific vital forms, and that the vital forms themselves, or "accidental" variations of them, cannot modify the types of action in vital force. Now, although Mr. Murphy's propositions may need no proof, they

will bear correction ; and, clear as they appear to be, a better interpretation of the physical facts is needed for the purposes of tracing out analogy and avoiding paralogism. Strange as it may seem, Mr. Murphy's clear antitheses are not even partially true. No abstraction ever produced any other abstraction, much less a concrete thing. The abstract laws of attraction never produced any body, spherical or polyhedral. It was actual forces acting in definite ways that made the sphere or crystal ; and the sizes, particular shapes, and positions of these bodies determined in part the action of these actual forces. It is the resultants of many actual attractions, dependent in turn on the actual products, that determine the spherical or crystalline forms. Moreover, in the case of crystals, neither these forces nor the abstract law of their action in producing definite angles reside in the finished bodies, but in the properties of the surrounding media, portions of whose constituents are changed into crystals, according to these properties and to other conditioning circumstances. So far as these bodies have any innate principle in them concerned in their own production, it is manifested in determining, not their general agreements, but their particular differences in sizes, shapes, and positions. The particular position of a crystal that grows from some fixed base or nucleus, and the particular directions of its faces, may, perhaps, be said to be *innate* ; that is, they were determined at the beginning of the particular crystal's growth. Finding, therefore, what Mr. Murphy and Mr. Mivart suppose to be innate to be really in the outward conditions of the crystal's growth, and what they would suppose to be superinduced to be all that is innate in it, we have really found the contrast in place of an analogy between a crystal and an organism. For, in organisms, no doubt, and as we may be readily convinced without resort to analogy, there is a great deal that is really innate, or dependent on actions in the organism, which diversities of external conditions modify very little, or affect at least in a very indeterminate manner, so far as observation has yet ascertained. External conditions are, nevertheless, essential factors in development, as well as in mere increase or growth. No animal or plant is developed, nor do its developments acquire any growth without very special external condi-

tions. These are quite as essential to the production of an organism as a crystalline nucleus and fluid material are to the growth and particular form of a crystal; and as the general resemblances of the crystals of any species, the agreements in their angles, are results of the physical properties of their food and other surrounding conditions of their growth, so the general resemblances of animals or plants of any species, their agreements in specific characters, are doubtless due, in the main, to the properties of what is innate in them, yet not to any abstraction. This is sufficiently conspicuous not to "need any proof," and is denied by no Darwinian. The analogy is so close indeed between the internal determinations of growth in an organism and the external ones of crystals, that Mr. Darwin was led by it to invent his "provisional hypothesis of Pangenesis," or theory of gemmular reproduction. The gemmules in this theory being the perfect analogues of the hypothetical atoms of the chemical substances that are supposed to arrange themselves in crystalline forms, the theory rather gives probability to the chemical theory of atoms than borrows any from it. But we shall recur to this theory of Pangenesis further on.

General physiology, or physical and theoretical biology, are sciences in which, through the study of the laws of inheritance, and the direct and indirect effect of external conditions, we must arrive, if in any way, at a more and more definite knowledge of the causes of specific manifestations; and this is what Mr. Darwin's labors have undertaken to do, and have partially accomplished. Every step he has taken has been in strict conformity to the principles of method which the examples of inductive and experimental science have established. A stricter observance of these by Mr. Murphy and our author might have saved them from the mistake we have noticed, and from many others,—the "realism" of ascribing efficacy to an abstraction, making attraction and polarity produce structures and forms independently of the products and of the concrete matters and forces in them. A similar "realism" vitiates nearly all speculations in theoretical biology, which are not designedly, or even instinctively, as in Mr. Darwin's work, made to conform to the rigorous rules of experimental philosophy. These require us to assume no causes that are not true or phenomenally known,

and known in some other way than in the effect to be explained ; and to prove the sufficiency of those we do assume in some other way than by putting an abstract name or description of an effect for its cause, like using the words "attraction" and "polarity" to account for things the matters of which have *come together* in a *definite form*. It may seem strange to many readers to be told that Mr. Darwin, the most consummate speculative genius of our times, is no more a maker of hypotheses than Newton was, who, unable to discover the cause of the properties of gravitation, wrote the often-quoted but much misunderstood words, "*Hypotheses non fingo.*" "For," he adds, "whatever is not deduced from the phenomena is to be called an hypothesis ; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility, and the impulsive force of bodies, and the laws of motion and gravitation, were discovered. And to us it is enough that gravity does really exist and act according to the laws which we have explained, and abundantly serves to account for all the motions of the celestial bodies and of our sea." Thus, also, it is that the variability of organisms and the known laws of variation and inheritance, and of the influences of external conditions, and the law of Natural Selection, have been discovered. And though it is not enough that variability and selection do really exist and act according to laws which Mr. Darwin has explained (since the limits of their action and efficiency are still to be ascertained), yet it is enough for the present that Darwinians do not rest, like their opponents, contented with framing what Newton would have called, if he had lived after Kant, "*transcendental hypotheses*," which have no place in experimental philosophy. It may be said that Mr. Darwin has invented the hypothesis of Pangenesis, against the rules of this philosophy ; but so also did Newton invent the corpuscular theory of light, with a similar purpose and utility.

In determining the limits of the action of Natural Selection, and its sufficiency within these limits, the same demonstrative adequacy should not, for obvious reasons, be demanded as con-

ditions of assenting to its highly probable truth, that Newton proved for his speculation. For the facts for this investigation are hopelessly wanting. Astronomy presents the anomaly, among the physical sciences, of being the only science that deals in the concrete with a few naturally isolated causes, which are separated from all other lines of causation in a way that in other physical sciences can only be imitated in the carefully guarded experiments of physical and chemical laboratories. The study of animals and plants under domestication is, indeed, a similar mode of isolating with a view to ascertaining the physical laws of life by inductive investigations. But the theory of Natural Selection, in its actual application to the phenomena of life and the origin of species, should not be compared to the theory of gravitation in astronomy, nor to the principles of physical science as they appear in the natures that are shut in by the experimental resources of the laboratory, but rather to these principles as they are actually working, and have been working, in the concrete courses of outward nature, in meteorology and physical geology. Still better, perhaps, at least for the purposes of illustration, we may compare the principle of Natural Selection to the fundamental laws of political economy, demonstrated and actually at work in the production of the values and the prices in the market of the wealth which human needs and efforts demand and supply. Who can tell from these principles what the market will be next week, or account for its prices of last week, even by the most ingenious use of hypotheses to supply the missing evidence? The empirical economist and statistician imagines that he can discover some other principles at work, some predetermined regularity in the market, some "innate" principles in it, to which the general laws of political economy are subordinated; and speculating on them, might risk his own wealth in trade, as the speculative "vitalist" might, if anything could be staked on a transcendental hypothesis. In the same way the empirical weather-philosopher thinks he can discern regularities in the weather, which the known principles of mechanical and chemical physics will not account for, and to which they are subordinate. This arises chiefly from his want of imagination, of a clear mental grasp of these principles, and of an adequate knowledge of the resources of legitimate hypoth

esis to supply the place of the unknown incidental causes through which these principles act. Such are also the sources of most of the difficulties which our author has found in the applications of the theory of Natural Selection.

His work is chiefly taken up with these difficulties. He does not so much insist on the probability of his own transcendental hypothesis, as endeavor to make way for it by discrediting the sufficiency of its rival ; as if this could serve his purpose ; as if experimental philosophy itself, without aid from "Darwinism," would not reject his metaphysical, occult, transcendental hypothesis of a specially predetermined and absolute fixity of species,— an hypothesis which multiplies species in an organism to meet emergencies,— the emergencies of theory,— much as the epicycles of Ptolemy had to be multiplied in the heavens. Ptolemy himself had the sagacity to believe that his was only a mathematical theory, a mode of representation, not a theory of causation ; and to prize it only as representative of the facts of observation, or as "saving the appearances." Mr. Mivart's theory, on the other hand, is put forward as a theory of causation, not to save appearances, but to justify the hasty conclusion that they are real ; the appearances, namely, of complete temporary fixity, alternating with abrupt changes, in the forms of life which are exhibited by the scanty records of geology and in present apparently unchanging natural species.

Before proceeding to a special consideration of our author's difficulties on the theory of Natural Selection, we will quote from Mr. Darwin's latest work, "The Descent of Man," his latest views of the extent of the action of this principle and its relations to the general theory of evolution. He says (Chapter IV.) :—

"Thus a very large yet undefined extension may safely be given to the direct and indirect results of Natural Selection ; but I now admit, after reading the essay by Nägeli on plants, and the remarks by various authors with respect to animals, more especially those recently made by Professor Broca, that in the earlier editions of my 'Origin of Species' I probably attributed too much to the action of Natural Selection, or the survival of the fittest. I have altered the fifth edition of the 'Origin' [the edition which Mr. Mivart reviews in his work], so as to confine my remarks to adaptive changes of structure. I had not formerly sufficiently considered the existence of many structures which

appear to be, as far as we can judge, neither beneficial nor injurious ; and this I believe to be one of the greatest oversights as yet detected in my work. I may be permitted to say, as some excuse, that I had two distinct objects in view : firstly, to show that species had not been separately created ; and secondly, that Natural Selection had been the chief agent of change, though largely aided by the inherited effects of habit, and slightly by the direct action of the surrounding conditions. Nevertheless, I was not able to annul the influence of my former belief, then widely prevalent, that each species had been purposely created ; and this led to my tacitly assuming that every detail of structure, excepting rudiments, was of some special, though unrecognized, service. Any one with this assumption in his mind would naturally extend the action of Natural Selection, either during past or present times, too far. Some of those who admit the principle of evolution, but reject Natural Selection, seem to forget, when criticising my work, that I had the above two objects in view ; hence, if I have erred in giving to Natural Selection great power, which I am far from admitting, or in having exaggerated its power, which is in itself probable, I have at least, as I hope, done good service in aiding to overthrow the dogma of separate creations."

In one other respect Mr. Darwin has modified his views of the action of Natural Selection, in consequence of a valuable criticism in the North British Review of June, 1867 ; and our author regards this modification as very important, and says of it that " this admission seems almost to amount to a change of front in the face of the enemy." It is not, as we shall see, an important modification at all, and does not change in any essential particular the theory as propounded in the first edition of the " Origin of Species," but our author's opinion of it has helped us to discover what, without this confirmation, seemed almost incredible, — how completely he has misapprehended, not merely the use of the theory in special applications, which is easily excusable, but also the nature of its general operation and of the causes employed by it ; thus furnishing an additional illustration of what he says in his Introduction, that " few things are more remarkable than the way in which it [this theory] has been misunderstood." One other consideration has also been of aid to us. In his concluding chapter on " Theology and Evolution," in which he very ably shows, and on the most venerable authority, that there is no necessary

conflict between the strictest orthodoxy and the theory of evolution, he remarks (and quotes Dr. Newman) on the narrowing effect of single lines of study. Not only inabilities may be produced by a one-sided pursuit, but "a positive distaste may grow up, which, in the intellectual order, may amount to a spontaneous and unreasoning disbelief in that which appears to be in opposition to the more familiar concept, and this at all times." This is, of course, meant to apply to those who, from want of knowledge, also lack ability and interest and even acquire a distaste for theological studies. But it also has other and equally important applications. Mr. Mivart, it would at first sight seem, being distinguished as a naturalist and also versed in theology, is not trammelled by any such narrowness as to disable him from giving just weight to both sides of the question he discusses. But what are the two sides? Are they the view of the theologian and the naturalist? Not at all. The debate is between the theologian and descriptive naturalist on one side, or the theologian and the student of natural history in its narrowest sense, that is, systematic biology; and on the other side the physical naturalist, physiologist, or theoretical biologist. Natural history and biology, or the general science of life, are very comprehensive terms, and comprise in their scope widely different lines of pursuit and a wide range of abilities. In fact, the sciences of biology contain contrasts in the objects, abilities, and interests of scientific pursuit almost as wide as that presented by the physical sciences generally, and the sciences of direct observation, description, and classification. The same contrast holds, indeed, even in a science so limited in its material objects as astronomy. The genius of the practical astronomer and observer is very different from that of the physical astronomer and mathematician; though success in this science generally requires nowadays that some degree of both should be combined. So the genius of the physiologist is different from that of the naturalist proper, though in the study of comparative anatomy the observer has to exercise some of the skill in analysis and in the use of hypotheses which are the genius of the physical sciences in the search for unknown causes. We may, perhaps, comprise all the forms of intellectual genius (excluding æsthetics) under

three chief classes, namely, first, the genius that pursues successfully the researches for unknown causes by the skilful use of hypothesis and experiment; secondly, that which, avoiding the use of hypotheses or preconceptions altogether and the delusive influence of names, brings together in clear connections and contrasts in classification the objects of nature in their broadest and realest relations of resemblance; and thirdly, that genius which seeks with success for reasons and authorities in support of cherished convictions.

That our author may have the last two forms of genius, even in a notable degree, we readily admit; but that he has not the first to the degree needed for an inquiry, which is essentially a branch of physical science, we propose to show. We have already pointed out how his theological education, his schooling against Democritus, has misled him in regard to the meaning of "accidents" or accidental causes in physical science; as if to the physical philosopher these could possibly be an absolute and distinct class, not included under the law of causation, "that every event must have a cause or determinate antecedents," whether we can trace them out or not. The accidental causes of science are only "accidents" relatively to the intelligence of a man. Eclipses have the least of this character to the astronomer of all the phenomena of nature; yet to the savage they are the most terrible of monstrous accidents. The accidents of monstrous variation, or even of the small and limited variations normal in any race or species, are only accidents relatively to the intelligence of the naturalist, or to his knowledge of general physiology. An accident is what cannot be anticipated from what we know, or by any intelligence, perhaps, which is less than omniscient.

But this is not the most serious misconception of the accidental causes of science, which our author has fallen into. He utterly mistakes the particular class of accidents concerned in the process of Natural Selection. To make this clear, we will enumerate the classes of causes which are involved in this process. In the first place, there are the external conditions of an animal's or plant's life, comprising chiefly its relations to other organic beings, but partly its relations to inorganic nature, and determining its needs and some of the means of satisfying them.

These conditions are consequences of the external courses of events or of the partial histories of organic and inorganic nature. In the second place, there are the general principles of the fitness of means to ends, or of supplies to needs. These comprise the best ascertained and most fundamental of all the principles of science, such as the laws of mechanical, optical, and acoustical science, by which we know how a leg, arm, or wing, a bony frame, a muscular or a vascular system, an eye or an ear, can be of *use*. In the third place, there are the causes introduced by Mr. Darwin to the attention of physiologists, as normal facts of organic nature, the little known phenomena of variation, and their relations to the laws of inheritance. There are several classes of these. The most important in the theory of Natural Selection are the diversities *always existing* in any race of animals or plants, called "individual differences," which *always* determine a better fitness of some individuals to the general conditions of the existence of a race than other less fortunate individuals have. The more than specific agreements in characters, which the best fitted individuals of a race must thus exhibit, ought, if possible, according to Cuvier's principles of zoölogy, to be included in the description of a species (as a norm or type which only the *best* exhibit), instead of the rough averages to which the naturalist really resorts in defining species by marks or characters that are variable. But probably such averages in variable characters are really close approximations to the characters of the best general adaptation; for variation being, so far as known, irrespective of adaptation, is as likely to exist to the same extent on one side of the norm of utility as on the other, or by excess as generally as by defect. Though variation is irrespective of utility, its limits are not. Too great a departure from the norm of utility must put an end to life and its successions. Utility therefore determines, along with the laws of inheritance, not only the middle line or safest way of a race, but also the bounding limits of its path of life; and so long as the conditions and principles of utility embodied in a form of life remain unchanged, they will, together with the laws of inheritance, maintain a race unchanged in its average characters. "Specific stability," therefore, for which theological and descriptive naturalists have speculated a

transcendental cause, is even more readily and directly accounted for by the causes which the theory of Natural Selection regards than is specific change. But just as obviously it follows from these causes that a change in the conditions and resources of utility, not only may but must change the normal characters of a species, or else the race must perish. Again, a slow and gradual change in the conditions of existence must, on these principles, slowly change the middle line or safest way of life (the descriptive or graphic line); but always, of course, this change must be within the existing limits of variation, or the range of "individual differences." A change in these limits would then follow, or the range of "individual differences" would be extended, at least, so far as we know, in the direction of the change. That it is widened or extended to a greater range by rapid and important changes in conditions of existence, is a matter of observation in many races of animals and plants that have been long subject to domestication or to the capricious conditions imposed by human choice and care. This phenomenon is like what would happen if a roadway or path across a field were to become muddy or otherwise obstructed. The travelled way would swerve to one side, or be broadened, or abandoned, according to the nature and degree of the obstruction, and to the resources of travel that remained. This class of variations, that is, "individual differences," constant and normal in a race, but having different ranges in different races, or in the same race under different circumstances, may be regarded as in no proper sense accidentally related to the advantages that come from them; or in no other sense than a tendril, or a tentacle, or a hand searching in the dark, is accidentally related to the object it succeeds in finding. And yet we say properly that it was by "accident" that a certain tendril was put forth so as to fulfil its function, and clasp the particular object by which it supports the vine; or that it was an accidental movement of the tentacle or hand that brought the object it has secured within its grasp. The search was, and continues to be, normal and general; it is the particular success only that is accidental; and this only in the sense that lines of causation, stretching backwards infinitely, and unrelated except in a first cause, or in the total order of nature,

come together and by their concurrence produce it. Yet over even this concurrence "law" still presides, to the effect that for every such concurrence the same consequences follow.

But our author, with his mind filled with horror of "blind chance," and of "the fortuitous concourse of atoms," has entirely overlooked the class of accidental variations, on which, even in the earlier editions of the "Origin of Species," the theory of Natural Selection is based, and has fixed his attention exclusively on another class, namely, abnormal or unusual variations, which Mr. Darwin at first supposed might also be of service in this process. The fault might, perhaps, be charged against Mr. Darwin for not sufficiently distinguishing the two classes, as well as overlooking, until it was pointed out by his critic in the "North British Review," before referred to, the fact that the latter class could be of no service; if it were not that our author's work is a review of the last edition of the "Origin of Species" and of the treatise on "Animals and Plants under Domestication," in both of which Mr. Darwin has emphatically distinguished these classes, and admitted that it is upon the first class only that Natural Selection can normally depend; though the second class of unusual and monstrous variations may give rise, by highly improbable though possible accidents, to changes in the characters of whole races. Mr. Mivart characterizes this admission by the words we have quoted, that "it seems almost to amount to a change of front in the face of the enemy"; of which it might have been enough to say, that the strategy of science is not the same as that of rhetorical disputation, and aims at cornering facts, not antagonists. But Mr. Mivart profits by it as a scholastic triumph over heresy, which he insists upon celebrating, rather than as a correction of his own misconceptions of the theory. He continues throughout his book to speak of the variations on which Natural Selection depends as if they were all of rare occurrence, like abrupt and monstrous variations, instead of being always present in a race; and also as having the additional disadvantage of being "individually slight," "minute," "insensible," "infinitesimal," "fortuitous," and "indefinite." These epithets are variously combined in different passages, but his favorite compendious formula is, "minute, fortuitous, and indefinite variations."

When, however, he comes to consider the enormous time which such a process must have taken to produce the present forms of life, he brings to bear all his forces, and says (p. 154) : "It is not easy to believe that less than two thousand million years would be required for the totality of animal development by no other means than minute, fortuitous, occasional, and intermitting variations in all conceivable directions." This exceeds very much — by some two hundred-fold — the length of time Sir William Thomson allows for the continuance of life on the earth. It is difficult to see how, with such uncertain "fortuitous, occasional, and intermitting" elements, our author could have succeeded in making any calculations at all. On the probability of the correctness of Sir William Thomson's physical arguments "the author of this book cannot presume to advance an opinion ; but," he adds (p. 150), "the fact that they have not been refuted pleads strongly in their favor when we consider how much they tell against the theory of Mr. Darwin." He can, it appears, judge of them on his own side.

For the descriptive epithets which our author applies to the variations on which he supposes Natural Selection to depend he has the following authority. He says (p. 35) : "Now it is distinctly enunciated by Mr. Darwin that the spontaneous variations upon which his theory depends are individually slight, minute, and insensible. He says (*Animals and Plants under Domestication*, Vol. II. p. 192) : 'Slight individual differences, however, suffice for the work, and are probably the sole differences which are effective in the production of new species.'" After what we have said as to the real nature of the differences from which nature selects, it might be, perhaps, unnecessary to explain what ought at least to have been known to a naturalist, that by "individual differences" is meant the differences between the individuals of a race of animals or plants ; that the slightness of them is only relative to the differences between the characters of species, and that they may be very considerable in themselves, or their effects, or even to the *eye* of the naturalist. How the expression "slight individual differences" could have got translated in our author's mind into "individually slight, minute, and insensible" ones, has no natural expla-

nation. But this is not the only instance of such an unfathomable translation in our author's treatment of the theory of Natural Selection. Two others occur on page 133. In the first he says: "Mr. Darwin abundantly demonstrates the variability of dogs, horses, fowls, and pigeons, but he none the less shows the *very small* extent to which the goose, the peacock, and the guinea-fowl have varied. Mr. Darwin attempts to explain this fact as regards the goose by the animal being valued only for food and feathers, and from no pleasure having been felt in it on other accounts. He adds, however, at the end, the striking remark, which concedes the whole position, 'but the goose seems to have a *singularly inflexible organization.*'" The translation is begun in the author's italics, and completed a few pages further on (p. 141), where, recurring to this subject, he says: "We have seen that Mr. Darwin himself implicitly admits the principle of specific stability in asserting the singular inflexibility of the organization of the goose." This is what is called in scholastic logic, *Fallacia a dicto secundum quid ad dictum simpliciter*. The obvious meaning, both from the contexts and the evidence, of the expression "singularly inflexible," is that the goose has been much less changed by domestication than other domestic birds. But this *relative* inflexibility is understood by our author as an admission of an *absolute* one, in spite of the evidence that geese have varied from the wild type, and have individual differences, and even differences of breeds, which are sufficiently conspicuous, even to the eye of a goose. The next instance of our author's translations (p. 133) is still more remarkable. He continues: "This is not the only place in which such expressions are used. He [Mr. Darwin] elsewhere makes use of phrases which quite harmonize with the conception of a normal specific constancy, but varying greatly and suddenly at intervals. Thus he speaks of a *whole organism seeming to have become plastic and tending to depart from the parental type* ('Origin of Species,' 5th edit., 1869, p. 13)." The italics are Mr. Mivart's. The passage from which these words are quoted (though they are not put in quotation-marks) is this: "It is well worth while carefully to study the several treatises on some of our old cultivated plants; as on the hyacinth, potato, even the dahlia,

etc. ; and it is really surprising to note the endless points in structure and constitution in which the varieties and sub-varieties differ slightly from each other. The whole organization seems to have become plastic, and tends to depart *in a slight degree* from that of the parental type.” The words that we have italicized in this quotation are omitted by our author, though essential to the point on which he cites Mr. Darwin’s authority, namely, as to the organism “varying greatly and suddenly at intervals.” Logic has no adequate name for this fallacy ; but there is another in our author’s understanding of the passage which is very familiar,— the fallacy of ambiguous terms. Mr. Darwin obviously uses the word “plastic” in its secondary signification as the name of that which is “capable of being moulded, modelled, or fashioned to the purpose, as clay.” But our author quite as obviously understands it in its primary signification as the name of anything “having the power to give form.” But this is a natural enough misunderstanding, since in scholastic philosophy the primary signification of “plastic” is the prevailing one.

Such being our author’s misconceptions of the principle of Natural Selection, and such their source, it would be useless to follow him in his tests of it by hypothetical illustrations from the history of animals ; but we are bound to make good our assertion that the author’s difficulties have arisen, not only from his want of a clear mental grasp of principles, but also from an inadequate knowledge of the resources of legitimate hypothesis to supply the unknown incidental causes through which the principle has acted. These deficiencies of knowledge and imagination, though more excusable, are not less conspicuous in his criticisms than the defects we have noticed. He says (p. 59) : “It may be objected, perhaps, that these difficulties are difficulties of *ignorance* ; that we cannot explain them, because we do not know *enough* of the animals.” It is not surprising that he adds : “But it is here contended that this is not the case ; it is not that we merely fail to see how Natural Selection acted, but that there is a positive incompatibility between the cause assigned and the results.” And no wonder that he remarks at the close of the chapter (Chapter II.) : “That minute, fortuitous, and indefinite varia-

tions could have brought about such special forms and modifications as have been enumerated in this chapter seems to contradict, not imagination, but reason."

In this chapter on "Incipient Structures," the fact is quite overlooked, which is so conspicuous in the principles of comparative anatomy, how few the fundamental structures are, which have been turned to such numerous uses; how meagre have been the resources of Natural Selection, so far as it has depended on the occurrence of structures which were of no previous use, or were not already partially useful in directions in which they have been modified by the selection and inheritance of "individual differences"; or how important to Natural Selection have been the principles of indirect utility and "correlated acquisition," dependent on ultimate physical laws. The human hand is still useful in swimming, and the fishes' fins could even be used for holding or clasping, if there were occasion for it. We might well attribute the paucity of indifferent types of structure to the agency of the rarest accidents of nature, though not in a theological sense. Animals and plants are no longer dependent for improvement on their occurrence, and, perhaps, never were after their competition and struggle for existence had fully begun. It is so much easier for them to turn to better account powers that they already possess in small degrees. Previously to such a competition and struggle, when the whole field of the inorganic conditions of life was open to simple organisms, they were doubtless much more variable than afterwards. But variability would then have been, as it is now, in no absolute sense accidental. On the contrary, variation would have been, instead of comparative stability in species, the most prominent normal feature of life. The tentative powers of life, instead of its hereditary features, trying all things, but not holding fast to that which is good, or not so firmly as afterwards, would have been its most characteristic manifestation. Our author's general difficulty in this chapter is as to how variations too small to have been of use could have been preserved, and he is correct in thinking that it could not be by Natural Selection, or the survival of the fittest, but wrong in thinking that variations are generally so rare or so insignificant, even in present

forms of life as to require a power other than those of life in general to bring them forth when needed, or to produce them in useful amounts.

The first example of the working of Natural Selection is the well-known case of the neck of the giraffe. This, it has been imagined, though not by Mr. Darwin, was produced by its supposed use in aiding this animal to feed on the foliage of trees, and by the occasional advantage it would give to the highest reaching individuals, when in drought and scarcity the ground vegetation and lower foliage was consumed, and by thus enabling them to survive the others and continue the species, transmitting this advantage to their offspring. Without denying that this is an excellent hypothetical illustration of the process of Natural Selection, Mr. Mivart attacks its probability as a matter of fact. In reply to it he says: "But against this it may be said, in the first place, that the argument proves too much; for, on this supposition, many species must have tended to undergo a similar modification, and we ought to have at least several forms similar to the giraffe developed from different *Ungulata*," or hoofed beasts. We would even go further than Mr. Mivart, and hold that, on the hypothesis in question, not only several forms, but the whole order of *Ungulata*, or large portions of it, should have been similarly modified; at least those inhabiting regions subject to droughts and presenting the alternative of grazing on the ground and browsing on the foliage of high trees. But as these alternatives do not universally exist in regions inhabited by such animals, very long necks would not, perhaps, characterize the whole order, if this hypothesis were true; as the habit of herding does, for example. We may observe, however, that this illustration from the giraffe's neck is not an *argument* at all, and proves nothing, though the hypothesis employed by it is very well called in question by Mr. Mivart's criticism. But can Mr. Mivart suppose that, having fairly called in question the importance of the high-feeding use of the giraffe's neck, he has thereby destroyed the utility of the neck altogether, not only to the theory of Natural Selection, but also to the animal itself? Is there, then, no important use in the giraffe's neck? Is it really the monstrosity it appears to be, when seen out of rela-

tion to the normal conditions of the animal's life? But if there be any utility left in the neck, as a teleologist or a believer in Final Causes would assume without question, and in spite of this criticism, then it might serve the purposes of Natural Selection even better perhaps than that of the mistaken hypothesis. If our author had approached this subject in the proper spirit, his criticism would probably have led him to an important observation, which his desire to discredit a much more important discovery has hidden from his view. He would have inquired what are the conditions of existence of the Ungulates generally and of the giraffe in particular, which are so close pressing and so emphatically attest the grounds of their severest struggle for life, as to be likely to cause in them the highest degree of specialty and adaptation. The question of food is obviously not concerned in such a struggle, for this order of animals lives generally upon food which is the most abundant and most easily obtained. Mr. Mivart compares his objection to one that has been made against Mr. Wallace's views as to the uses of color in animals, that "color being dangerous, should not exist in nature," or that "a dull color being needful, all animals should be so colored." He quotes Mr. Wallace's reply, but does not take the clew to the solution of his difficulty respecting the giraffe's neck, which it almost forces on him. This reply was, that many animals can afford brilliant colors, and their various direct uses or values, when the animals are otherwise provided with sufficient protection, and that brilliant colors are even sometimes indirectly protective. The quills of the porcupine, the shells of tortoises and mussels, the very hard coats of certain beetles, the stings of certain other insects, the nauseous taste of brilliantly colored caterpillars, and other instances, are given as examples. Now, what bearing has this on the long neck of the giraffe? According to our author, who is himself at this point on the defensive, it is as follows. He says: "But because many different kinds of animals can elude the observation or defy the attack of enemies in a great variety of ways, it by no means follows that there are any similar number and variety of ways for attaining vegetable food in a country where all such food other than the lofty branches of trees has been destroyed. In such a country we have a number

of vegetable-feeding Ungulates, all of which present minute variations as to the length of the neck." Mr. Mivart is apparently not aware that he is here arguing, not against the theory of Natural Selection, but against a subordinate and false hypothesis under it. But if he thinks thus to undermine the theory, it must be because he is not aware of, or has not present to his imagination, the numberless ingenuities of nature, and the resources of support the theory has to rest upon. There can be no doubt that the neck of the giraffe, whatever other uses it can be put to, and it is put to several, is pre-eminently useful as a *watch-tower*. Its eyes, large and lustrous, "which beam with a peculiarly mild but fearless expression, are so placed as to take in a wider range of the horizon than is subject to the vision of any other quadruped. While browsing on its favorite acacia, the giraffe, by means of its laterally projecting orbits, can direct its sight so as to anticipate a threatened attack in the rear from the stealthy lion or any other foe of the desert." When attacked, the giraffe can defend itself by powerful blows with its well-armed hoofs, and even its short horns can inflict fatal blows by the sidelong swing of its neck. But these are not its only protections against danger. Its nostrils can be voluntarily closed, like the camel's, against the sandy, suffocating clouds of the desert. "The tail of the giraffe looks like an artificially constructed fly-flapper; and it seems at first incredible," says Mr. Darwin, "that this could have been adapted for its present purpose by successive slight modifications, each better and better fitted, for so trifling an object as to drive away flies; yet we should pause before being too positive, even in this case, for we know that the distribution and existence of cattle and other animals in South America absolutely depend on their power of resisting the attacks of insects; so that individuals which could, by any means, defend themselves from these small enemies, would be able to range into new pastures, and thus gain a great advantage. It is not that the larger quadrupeds are actually destroyed (except in rare cases) by flies, but they are incessantly harassed and their strength reduced, so that they are more subject to disease, or not so well enabled in a coming dearth to search for food, or to escape from beasts of prey."

This passage recalls our main problem, which does not concern the giraffe alone, but all the Ungulates ; and its solution will show that this order of animals exhibits, almost as well as Mr. Wallace's examples, the resources that nature has for the protection of animals that have the disadvantage, not, indeed, generally of brilliant colors, but of exposure by living exclusively on bulky and comparatively innutritious food. Nearly all the resources of defensive warfare are exhausted in their specialties of protection. The giraffe alone is provided with a natural watch-tower, but the others are not left without defence. All, or nearly all, live in armies or herds, and some post sentinels around their herds. The numerous species of the antelope resort to natural fortifications or fastnesses. "They are the natives for the most part of the wildest and least accessible places in the warmer latitudes of the globe, frequenting the cliffs and ledges of mountain rocks or the verdure-clad banks of tropical streams, or the oases of the desert." Other tribes depend on their fleetness, and on hiding in woods like the deer. Others, again, on great powers of endurance in flight and long marches, like the camels with their commissaries of provision. Others, again, with powerful frames, like the rhinoceros and the bisons, resort to defensive attack. The ruminant habits and organs of large numbers are adapted to rapid and dangerous foraging, and to digestion under protection from beasts of prey and insects.

But our author, with little fertility of defence for the theory of Natural Selection, is still not without some ingenuity in attack. He objects, in the second place, that the longest necked giraffes, being by so much the larger animals, would not be strong in proportion, but would need more food to sustain them, a disadvantage which would, perhaps, more than outbalance the long neck in times of drought ; and he cites Mr. Spencer's ingenious speculations on the relations of size, food, and strength, in confirmation of this objection. But he forgets or overlooks the important physiological law of the compensation or economy of growth which prevails in variations. A longer neck does not necessarily entail a greater bulk or weight on the animal as a whole. The neck may have grown at the expense of the hind parts in the ancestors of the giraffe. If we

met with an individual man with a longer neck than usual, we should not expect to find him heavier, or relatively weaker, or requiring more food on that account. But let us pass to the next illustration of the insufficiency of Natural Selection. This is the difficulty our author finds in attributing to this cause various cases of mimicry or protective resemblances of animals to other animals, or to other natural objects. In some insects this is carried to a wonderful extent. Thus, some which imitate leaves when at rest, in the sizes, shapes, colors, and markings of their wings, "extend the imitation even to the very injuries on those leaves made by the attacks of insects or fungi." Thus Mr. Wallace says of the walking-stick insects: "One of these creatures, obtained by myself in Borneo, was covered over with foliaceous excrescences of a clear olive-green color so as exactly to resemble a stick grown over by creeping moss or jungermannia. The Dyak who brought it me assured me it was grown over with moss, although alive, and it was only after a most minute examination that I could convince myself it was not so." And in speaking of the leaf-butterfly, he says: "We come to a still more extraordinary part of the imitation, for we find representations of leaves in every stage of decay, variously blotched and mildewed, and pierced with holes, and in many cases irregularly covered with powdery black dots, gathered into patches and spots, so closely resembling the various kinds of minute fungi that grow on dead leaves that it is impossible to avoid thinking, at first sight, that the butterflies themselves have been attacked by real fungi." Upon these passages our author remarks: "Here imitation has attained a development which seems utterly beyond the power of the mere 'survival of the fittest' to produce. How this double mimicry can importantly aid in the struggle for life seems puzzling indeed, but much more so how the first beginnings of the imitation of such injuries in the leaf can be developed in the animal into such a complete representation of them; *a fortiori*, how simultaneous and similar first beginnings of imitations of such injuries could ever have been developed in several individuals, out of utterly indifferent and indeterminate infinitesimal variations in all conceivable directions."

What ought to have been first suggested to a naturalist by

this wonderful mimicry is, what clever entomologists some insectivorous birds must have become to be able to press the conditions of existence and the struggle for life in these insects to such a degree of specialty. But this, after all, is not so very wonderful, when we consider what microscopic sight these birds must have acquired and what practice and exclusive interest in the pursuit! We may feel pretty confident, however, that neither Natural Selection nor any occult or transcendental cause has ever carried protective mimicry beyond eyesight, though it may well be a better eyesight than that even of a skilful naturalist. There is no necessity to suppose, with our author, that the variations on which this selection depended were either simultaneous, or infinitesimal, or indifferent, for "individual differences" are always considerable and generally greatest in directions in which variations have already most recently occurred, as in characters in which closely allied races differ most from each other; but, doubtless, a very long time was required for these very remarkable cases of mimicry to have come to pass. Their difficulties resemble those of the development of sight itself, on which our author comments elsewhere; but in these particular cases the conditions of "hide and seek" in the sport of nature present correlated difficulties, which, like acid and alkali, serve to neutralize each other. In these cases, four distinct forms of life of widely diverse origins, or very remotely connected near the beginnings of life itself, like four main branches of a tree, have come together into closest relations, as parts of the foliage of the four main branches might do. These are certain insectivorous birds, certain higher vegetable forms, the imitated sticks or leaves, certain vegetable parasites on them, and the mimicking insects. But the main phenomenon was and is the neck-and-neck race of variation and selection between the powers of hiding in the insect and the powers of finding in the bird. Our author overlooks the fact that variations in the bird are quite as essential to the process as those of the insect, and has chosen to consider elsewhere the difficulties which the developments of the eye present, and in equal independence of its obvious uses. The fact that these, as well as other extraordinary cases of mimicry, are found only in tropical climates, or climates

equable not only in respect to short periodic but also secular changes, accords well with the probable length of time in which this competition has been kept up ; and the extraordinary, that is, rare character of the phénoménon agrees well with the probable supposition that it has always begun in what we call in science "an accident." If its beginnings were common, their natural consequences would also be common, and would not be wonderful ; and if it arose from a destructive, unintelligent, evil principle,—from Ahriman,—it has, at least, shown how the course of nature has been able to avoid destruction, to the astonishment of human intelligence, and how Oromasdes has been able to defeat his antagonist by turning evil into good.

Let us take next our author's treatment of a supposed origin of the mammary, or milk glands :—

"Is it conceivable," he asks (p. 60), "that the young of any animal was ever saved from destruction by accidentally sucking a drop of scarcely nutritious fluid from an accidentally hypertrophied cutaneous gland of its mother? And even if one was so, what chance was there of the perpetuation of such a variation? On the hypothesis of 'Natural Selection' itself we must assume that, up to that time, the race had been well adapted to the surrounding conditions; the temporary and accidental trial and change of conditions, which caused the so-sucking young one to be the 'fittest to survive' under the supposed circumstances, would soon cease to act, and then the progeny of the mother, with the accidentally hypertrophied sebaceous glands, would have no tendency to survive the far outnumbering descendants of the normal ancestral form."

Here, as before, our author stakes the fate of the theory on the correctness of his own conceptions of the conditions of its action. He forgets, first of all, that the use of a milk gland in its least specialized form requires at least a sucking mouth, and that sucking mouths and probosces have very extensive uses in the animal kingdom. They are good for drinking water and nectar, and are used for drawing blood as well as milk ; and, without reference to alimentation, are still serviceable for *support* to parasitical animals. Might not the young, which before birth are, in a high degree, parasitical in all animals, find it highly advantageous to continue the habit after birth, even without reference to food, but for the generally quite as impor-

tant use of protection against enemies, by clinging by a sucking mouth to the body of its dam? If this should cause sebaceous glands to become hypertrophied and ultimately a valuable or even an exclusive source of nutrition, it would, perhaps, be proper to describe the phenomenon as an unintended or accidental, but not as a rare or improbable one. Moreover, though on the theory of Natural Selection (or, indeed, on any theory of the continuance of a race by modifications of structures and habits), the race must, while it lives, be fitted to live, yet it need be no more fitted to do so than to survive in its offspring. No race is so well fitted to its general conditions of existence, but that some individuals are better fitted than others, and have, on the average, an advantage. And new resources do not imply abandonment of the old, but only additions to them, giving superiorities that are almost never superfluous. How, indeed, but by accidents of the rarest occurrence, could variation (much less selection) give superfluous advantages, on the whole, or except temporarily and so far as normal variations anticipate in general, regular, or usual changes in the conditions of existence? We have, to be sure, on the hypothesis we have proposed, still to account for the original of the sucking mouth, though its numerous uses are obvious enough, on the really uniform and unvarying types of natural law, the laws of inorganic physics, the principles of suction. But we are not ambitious to rival nature in ingenuity, only to contrast its resources with those of our naturalist. His next example is a criticism of the theory of Sexual Selection. Speaking of apes, he says: "When we consider what is known of the emotional nature of these animals and the periodicity of its intensification, it is hardly credible that a female would often risk life or limb through her admiration of a trifling shade of color or an infinitesimally greater, though irresistibly fascinating degree of wartiness." Is it credible that Mr. Mivart can suppose that the higher or spiritual emotions, like affection, taste, conscience, ever act *directly* to modify or compete with the more energetic lower impulses, and not rather by forestalling and indirectly regulating them, as by avoiding temptation in the case of conscience; or by establishing social arrangements, companionships, friendships, and more or less permanent marriages in

the case of sexual preferences? All such arrangements, all grounds for the action of taste or admiration, or any but the most monstrous friendships, are prevented or removed in the lives of caged beasts. His example and his inference from it are as much as if an explorer should discover a half-famished tribe of savages sustaining life upon bitter and nauseous food, and should conclude that not only these but all savages, the most provident, or even all men, are without any choice in food, and that in providing for future wants they are influenced by no other considerations than the grossest cravings of appetite.

But to return to Natural Selection. The next example is that of the rattling and expanding powers of poisonous snakes. The author says that "in poisonous serpents, also, we have structures which, at all events, at first sight, seem positively hurtful to these reptiles. Such are the rattle of the rattlesnake and the expanding neck of the cobra, the former serving to warn the ear of the intended victim as the latter warns the eye." This "first sight" is all the use our author discovers in these organs; but why should these warnings be intended or used to drive away intended *victims* rather than *enemies*? Or is it among the intentions of nature to defeat those in the serpent? If the effects of such "warnings" really were to deprive these snakes of their proper food, would not experience itself and intelligence be sufficient in the wily serpent to correct such perverse instincts? It is, indeed, at first sight, curious that certain snakes, though these are the sluggish kinds, and cannot so easily escape their enemies by flight as others can, should be provided, not only with poisonous fangs, but with these means of warning either victims or dangerous enemies. But Mr. Wallace has furnished a clew to their correlation by his example of the relations between conspicuous colors and nauseous tastes in many caterpillars, the color serving as a sign of the taste and warning birds not to touch these kinds. The poisonous fang and its use are expensive and risky means of defence; the warnings associated with them are cheap and safe. But if, as is very likely, these "warnings" are also used against intended victims, they can only be used either to paralyze them with terror or allure them from curiosity, or to

produce in them that curious and paralyzing mixture of the two emotions, alarm and something like curiosity, which is all that is probably true of the supposed powers of fascination* in serpents. Perhaps, also, the rattle serves to inspire the sluggish snake itself with courage ; and in this case the rattle will serve all the purposes that drums, trumpets, and gongs do in human warfare. The swaying body and vibrating tongue of most snakes, and the expanding neck and the hood of the cobras, may serve for banners. But the rattle has also been supposed to serve as a sexual call, very much as the inspirations of warfare are turned into the allurements of the tournament, or as gongs also serve to call travellers to dinner. What poverty of resources in regard to the relations of *use* in the lives of animals thus distinguishes our naturalist from the natural order of things ! What wealth and capital are left for the employments and industries of Natural Selection !

In the next chapter our author charges the theory of Natural Selection with inability to account for independent similarities of structure ; " that it does not harmonize with the coexistence of closely similar structures of diverse origin," like the dental structures in the dog and in the carnivorous marsupial, the Thylacine, closely similar structures and of exactly the same utilities, though belonging to races so diverse that their common ancestors could not have been like them in respect to this resemblance. But these structures really differ in points not essential to their utilities ; in characters which, though inconspicuous, are marks of the two great divisions of mammalia, to which these animals belong. Our author here attacks the theory in its very citadel, and has incautiously left a hostile force in his rear. He has claimed in the preceding chapter for Natural Selection that it ought to have produced several independent races of long-necked Ungulates, as well as the giraffe ; so that, instead of pursuing his illustrations any further, we

* This is a real condition of mind in the subject of it; a condition in which interest or emotion gives to an idea such fixity and power that it takes possession at a fatal moment of the will and acts itself out ; as in the fascination of the precipice. It is not, however, to be regarded as a natural contrivance in the mental acquisitions of the victims for the benefit of the serpent any more than the serpent's warnings are for their benefit ; but as a consequence of ultimate mental laws in general, of which the serpent's faculties and habits take advantage.

may properly demand his surrender. Of course Natural Selection requires for similar products similar means and conditions ; but these are of such a general sort that they belong to wide ranges of life ; and as it does not act by " blind chance," or theological accidents, but by the invariable laws of nature and the tentative powers of life, it is not surprising that it often repeats its patterns independently of descent, or of the copying powers of inheritance.

That the highest products of nature are not the results of the mere forces of inheritance, and do not come from the birth of latent powers and structures, seems to be the lesson of the obscure discourse in which Jesus endeavored to instruct Nicodemus the Pharisee. How is it that a man can be born again, acquire powers and characters that are not developments of what is already innate in him ? How is it possible when he is old to acquire new innate principles, or to enter a second time into his mother's womb and be born ? The reply does not suggest our author's hypothesis of a life turning over upon a new " facet," or a new set of latent inherited powers. Only the symbols, water and the Spirit, which Christians have ever since worshipped, are given in reply ; but the remarkable illustration of the accidentality of nature is added, which has been almost equally though independently admired. " Marvel not that I said unto thee, Ye must be born again. The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth ; so is every one that is born of the Spirit." The highest products of nature are the outcome of its total and apparently accidental orders ; or are born of water and the Spirit, which symbolize creative power. To this the Pharisee replied : " How can these things be ? " And the answer is still more significant : " Art thou a master of Israel and knowest not these things ? " We bring natural evidences, " and ye receive not our witness. If I have told you earthly (natural) things, and ye believe not, how shall ye believe if I tell you heavenly (supernatural) things ? " The bearing of our subject upon the doctrine of Final Causes in natural history has been much discussed and is of considerable importance to our author's theory and criticism. But we propose, not only to distinguish between this branch of theology

and the theories of inductive science on one hand, but still more emphatically, on the other hand, between it and the Christian faith in divine superintendency, which is very liable to be confounded with it. The Christian faith is that even the fall of a sparrow is included in this agency, and that as men are of more value than many sparrows, so much more is their security. So far from weakening this faith by showing the connection between value and security, science and the theory of Natural Selection have confirmed it. The very agencies that give values to life secure them by planting them most broadly in the immutable grounds of utility. But Natural Theology has sought by Platonic, not Christian, imaginations to discover, not the relations of security to value, but something *worthy* to be the source of the value considered as *absolute*, some particular worthy source of each valued end. This is the motive of that speculation of Final Causes which Bacon condemned as sterile and corrupting to philosophy, interfering, as it does, with the study of the facts of nature, or of what *is*, by preconceptions, necessarily imperfect as to what *ought to be*; and by deductions from assumed *ends*, thought worthy to be the purposes of nature. The naturalists who "take care not to ascribe to God any intention," sin rather against the spirit of Platonism than that of Christianity, while obeying the precepts of experimental philosophy. Though, as our author says, in speaking of the moral sense and the impossibility, as he thinks, that the accumulations of small repugnances could give rise to the strength of its abhorrence and reprobation; though, as he says, "no stream can rise higher than its source"; while fully admitting the truth of this, we would still ask, Where is its source? Surely not in the little fountains that Platonic explorers go in search of, *a priori*, which would soon run dry but for the rains of heaven, the water and the vapor of the distilling atmosphere. Out of this come also the almost weightless snow-flakes, which, combined in masses of great gravity, fall in the avalanche. The results of moralizing Platonism should not be confounded with the simple Christian faith in Divine superintendence. The often-quoted belief of Professor Gray, "that variation has been led along certain beneficial lines, like a stream along definite lines of irrigation,"

might be interpreted to agree with either view. The lines on which variations are generally useful are lines of search, and their particular successes, dependent, it is true, on no theological or absolute accidents, may be regarded as being lines of beneficial variations, seeing that they have resulted through laws of nature and principles of utility in higher living forms, or even in continuing definite forms of life on the earth. But thousands of movements of variation, or efforts of search, have not succeeded to one that has. These are not continued along evil lines, since thousands of forms have perished in consequence of them for every one that has survived.

The growth of a tree is a good illustration of this process, and more closely resembles the action of selection in nature generally than might at first sight appear; for its branches are selected growths, a few out of many thousands that have begun in buds; and this rigorous selection has been effected by the accidents that have determined superior relations in surviving growths to their supplies of nutriment in the trunk and in exposure to light and air. This exposure (as great as is consistent with secure connection with the sources of sap) seems actually to be sought, and the form of the tree to be the result of some foresight in it. But the real seeking process is budding, and the geometrical regularity of the production of buds in twigs has little or nothing to do with the ultimate selected results, the distributions of the branches, which are different for each individual tree. Even if the determinate variations really existed,—the “facets” of stable equilibrium in life, which our author supposes,—and were arranged with geometrical regularity on their spheroid of potential forms, as leaves and buds are in the twig, they would probably have as little to do with determining the ultimate diversities of life under the action of the selection which our author admits as phyllotaxy has to do with the branching of trees. But phyllotaxy, also, has its utility. Its orders are the best for packing of the incipient leaves in the bud, and the best for the exposure to light and air of the developed leaves of the stem. But here its utility ends, except so far as its arrangements also present the greatest diversity of finite elements, within the smallest limits, for the subsequent choice of successful growths; being *the nearest*

approaches that finite regularity could make to "indefinite variations in all conceivable directions." The general resemblance of trees of a given kind depends on no formative principle other than physical and physiological properties in the woody tissue, and is related chiefly to the tenacity, flexibility, and vascularity of this tissue, the degrees of which might almost be inferred from the general form of the tree. It cannot be doubted, in the case of the tree, that this tentative though regular budding has been of service to the production of the tree's growth, and that the particular growths which have survived and become the bases of future growths were determined by a beneficial though accidental order of events under the total orders of the powers concerned in the tree's development. But if a rigorous selection had not continued in this growth, no proper branching would have resulted. The tree would have grown like a cabbage. Hence it is to selection, and not to variation,—or rather to the *causes* of selection, and not to those of variation,—that species or well-marked and widely separated forms of life are due. If we could study the past and present forms of life, not only in different continents, which we may compare to different individual trees of the same kind, or better, perhaps, to different main branches from the same trunk and roots, but could also study the past and present forms of life in different planets, then diversities in the general outlines would probably be seen similar to those which distinguish different kinds of trees, as the oak, the elm, and the pine; dependent, as in these trees, on differences in the physical and physiological properties of living matters in the different planets,—supposing the planets, of course, to be capable of sustaining life, like the earth, or, at least, to have been so at some period in the history of the solar system. We might find that these general outlines of life in other planets resemble elms or oaks, and are not pyramidal in form like the pine, with a "crowning" animal like man to lead their growths. For man, for aught we know or could guess (but for the highly probable accidents of nature, which blight the topmost terminal bud and give ascendancy to some lateral one), except for these accidents, man *may* have always been the crown of earthly creation, or always "man," if you choose so to name and define the creature who, though once an as-

cidian (when the ascidian was the highest form of life), *may* have been the *best* of the ascidians. This would, perhaps, add nothing to the present value of the race, but it might satisfy the Platonic demand that the race, though not derived from a source quite worthy of it, yet should come from the *best* in nature.

We are thus led to the final problem, at present an apparently insoluble mystery, of the origin of the first forms of life on the earth. On this Mr. Darwin uses the figurative language of religious mystery, and speaks "of life with its several powers being originally breathed by the Creator into a few forms or into one." For this expression our author takes him to task, though really it could mean no more than if the gravitational properties of bodies were referred directly to the agency of a First Cause, in which the philosopher professed to believe; at the same time expressing his unwillingness to make hypotheses, that is, transcendental hypotheses, concerning occult modes of action. But life is, indeed, divine, and there is grandeur in the view, as Mr. Darwin says, which derives from so simple yet mysterious an origin, and "from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals." Our author, however, is much more "advanced" than Mr. Darwin on the question of the origin of life or archigenesis, and the possibility of it as a continuous and present operation of nature. He admits what is commonly called "spontaneous generation," believing it, however, to be not what in theology is understood by "spontaneous," but only a sudden production of life by chemical synthesis out of inorganic elements. The absence of decisive evidence on this point does not deter him, but the fact that the doctrine can be reconciled to the strictest orthodoxy, and accords well with our author's theory of sudden changes in species, appears to satisfy him of its truth. The theory of Pangenesis, on the other hand, invented by Mr. Darwin for a different purpose, though not inconsistent with the very slow generation of vital forces out of chemical actions,—slow, that is, and insignificant compared to the normal actions and productions of chemical forces,—is hardly compatible with the sudden and conspicuous appearance

of new life under the microscope of the observer. This theory was invented like other provisional theories,—like Newton's corpuscular theory of light, like the undulatory theory of light (though this is no longer provisional), and like the chemical theory of atoms,—for the purpose of giving a material or visual basis to the phenomena and empirical laws of life in general, by embodying in such supposed properties the phenomena of development, the laws of inheritance, and the various modes of reproduction, just as the chemical theory of atoms embodies in visual and tangible properties the laws of definite and multiple proportions, and the relations of gaseous volumes in chemical unions, together with the principle of isomerism and the relations of equivalent weights to specific heats. The theory of Pangenesis presents life and vital forces in their ultimate and essential elements as perfectly continuous, and in great measure isolated from other and coarser orders of forces, like the chemical and mechanical, except so far as these are the necessary theatres of their actions. Gemmules, or vital molecules, the smallest bodies which have separable parts under the action of vital forces, and of the same order as the scope of action in these forces,—these minute bodies, though probably as much smaller than chemical molecules as these are smaller than rocks or pebbles, may yet exist in unorganized materials as well as in the germs of eggs, seeds, and spores, just as crystalline structures or chemical aggregations may be present in bodies whose form and aggregation are mainly due to mechanical forces. And, as in mechanical aggregations (like sedimentary rocks), chemical actions and aggregations slowly supervene and give in the metamorphosis of these rocks an irregular crystalline structure, so it is supposable that finer orders of forces lying at the heart of fluid matter may slowly produce imperfect and irregular vital aggregations. But *definite* vital aggregations and *definite* actions of vital forces exist, for the most part, in a world by themselves, as distinct from that of chemical forces, actions, and aggregations as these are from the mechanical ones of dynamic surface-geology, which produce and are embodied in visible and tangible masses through forces the most directly apparent and best understood; or as distinct as these are from the internal forces of geology and the masses of

continents and mountain formations with which they deal ; or as distinct again as these are from the actions of gravity and the masses in the solar system ; or, again, as these are from the unknown forces and conditions that regulate sidereal aggregations and movements. These various orders of molar and molecular sizes are limited in our powers of conception only by the needs of hypothesis in the representation of actual phenomena under visual forms and properties. Sir William Thomson has lately determined the probable sizes of chemical molecules from the phenomena of light and experiments relating to the law of the "conservation of force." According to these results, these sizes are such that if a drop of water were to be magnified to the size of the earth, its molecules, or parts dependent on the forces of chemical physics, would be seen to range from the size of a pea to that of a billiard-ball. But there is no reason to doubt that in every such molecule there are still subordinate parts and structures ; or that, even in these parts, a still finer order of parts and structures exists, at least to the extent of assimilated growth and *simple* division. Mr. Darwin supposes such growths and divisions in the vital gemmules ; but our author objects (p. 230) that, "to admit the power of spontaneous division and multiplication in such rudimentary structures seems a complete contradiction. The gemmules, by the hypothesis of Pangenesis, are the ultimate organized components of the body, the absolute organic atoms of which each body is composed ; how then *can* they be divisible ? Any part of a gemmule would be an impossible (because *less* than possible) quantity. If it is divisible into still smaller organic wholes, as a germ-cell is, it must be made up, as the germ-cell is, of subordinate component atoms, which are then the *true* gemmules." But this is to suppose what is not implied in the theory (nor properly even in the chemical theory of atoms), that the sizes of these bodies are any more constant or determinate than those of visible bodies of any order. It is the order only that is determinate ; but within it there may be wide ranges of sizes. A billiard-ball may be divided into parts as small as a pea, or peas may be aggregated into masses as large as a billiard-ball, without going beyond the order of forces that produce both sizes. Our author himself says afterwards

and in another connection (p. 290), "It is possible that, in some minds, the notion may lurk that such powers are simpler and easier to understand, because the bodies they affect are so minute! This absurdity hardly bears stating. We can easily conceive a being so small that a gemmule would be to it as large as St. Paul's would be to us." This argument, however, is intended to discredit the theory on the ground that it does not tend to simplify matters, and that we must rest somewhere in "what the scholastics called 'substantial forms.'" But this criticism, to be just, ought to insist, not only that vital phenomena are due to "a special nature, a peculiar innate power and activity," but that chemical atoms only complicate the mysteries of science unnecessarily; that corpuscles and undulations only hide difficulties; and that we ought to explain very simply that crystalline bodies are produced by "polarity," and that the phenomena of light and vision are the effects of "luminosity." This kind of simplicity is not, however, the purpose which modern science has in view; and, consequently, our real knowledges, as well as our hypotheses, are much more complicated than were those of the schoolmen. It is not impossible that vital phenomena themselves include orders of forces as distinct as the lowest vital are from chemical phenomena. May not the contrast of merely vital or vegetative phenomena with those of *sensibility* be of such orders? But, in arriving at *sensibility*, we have reached the very elements out of which the conceptions of size and movement are constructed,—the elements of the tactful and visual constructions that are employed by such hypotheses. Can sensibility and the movements governed by it be derived directly by chemical synthesis from the forces of inorganic elements? It is probable, both from analogy and direct observation, that they cannot (though some of the believers in "spontaneous generation" think otherwise); or that they cannot, except by that great alchemic experiment which, employing all the influences of nature and all the ages of the world, has actually brought forth most if not all of the definite forms of life in the last and greatest work of creative power.

CHAUNCEY WRIGHT.

ART. IV.—THE MEANING OF REVENUE REFORM.

“ WITH a revenue stamp dispensed by postmasters, a tax upon liquors of all sorts, and tobacco in all its forms, and by a wise adjustment of the tariff, *which will put a duty only upon articles which we could dispense with, known as luxuries, and on those which we use more of than we produce*, revenue enough may be raised, after a few years of peace, to fulfil all our obligations.”

“ Revenue reform, if it means this, has my hearty support. If it implies a collection of all the revenue for the support of government, for the payment of the principal and interest of the public debt, pensions, etc., by directly taxing the people, then I am against revenue reform. If it means failure to provide the necessary means to defray all the expenses of government, and thereby repudiation of the public debt and pensions, then I am still more opposed to such kind of revenue reform. *Revenue reform has not been defined by any of its advocates to my knowledge, but seems to be accepted as something which is to supply every man's wants, without any cost or effort on his part.* A true revenue reform cannot be made in a day, *but must be the work of national legislation and of time.* As soon as the revenue can be dispensed with, *all duty should be removed from coffee, tea, and other articles of universal use not produced by ourselves.* The necessities of the country compel us to collect revenue from our imports.”—*Message of the President of the United States, December, 1870.*

Soon after the reading of the above lucid exposition of the principles of financial economy by the clerk of the House of Representatives, it is said that General Robert C. Schenck happened to meet General Benjamin F. Butler, when the two great political chieftains, forgetting for the time all former differences, formally congratulated each other “that revenue reform was now dead”; a conclusion doubtless due, in a great measure, to the circumstance that to minds ignorant or bewildered things mysterious or enigmatic always seem unduly potential.

If, however, “revenue reform,” according to the two most

respectable gentlemen referred to, is actually dead, and if General Grant, in common with many other foes, has slain it, then the time has properly come to write its biography. But if, on the other hand, "revenue reform" is not dead, but a stout, lusty fellow, growing stronger every day, and likely soon, in consciousness of his strength, to lay his fists vigorously about him, then it is still more important to inquire into its character and purposes; and to such an inquiry we propose to endeavor to return an answer.

The term "revenue reform," in its widest and possible future party acceptation, is a general one, expressive of a conviction on the part of those who adopt it that the existing financial system and the financial management or policy of the present government is not what it should be; not in harmony with the interests and necessities of the whole country, and not at all in accord with the experience and requirements of the most advanced civilization. Those holding to such views demand *reform*, — reform in the collection and apportionment of taxes or revenue; reform in the amount of revenue to be collected; reform in its expenditure or use when collected; reform in the selection and tenure of office of those by whom the national finances are managed; and finally, more than all else, they demand that there shall be continued, enlightened, and thorough investigation, a distinct recognition of the importance of investigation, and a willingness to adopt promptly the results of investigation when facts and arguments alike prove that these are likely to conduce to the welfare of the country. As a correlative to so much of positive declaration, the advocates of revenue reform also declare that, at the present time, there is neither good sense nor sound judgment displayed in the management of our national fiscal affairs; and further, that, under the present administration, all attempts to insure progress through investigation have been studiously repressed and forbidden, rather than encouraged and stimulated.*

* As one illustration in proof of this assertion, it may be mentioned that, in 1869, when it was proposed, in anticipation of the discussion of the income tax by Congress at its approaching session, to prepare for public information a full statement of the working and distribution of this tax, the amount paid respectively by the recipients of large, moderate, and small incomes, and the amount and number of individuals exempted under the law as then existing; the Secretary of

The charge so frequently brought against the advocates of revenue reform, that they have no definite financial system to propose, so far from being a defect is in truth a claim to merit. The conditions on which the fiscal system of a great nation can be properly based and ordered, namely, the character and aptitudes of the people, the natural resources of the country, the indispensable requirements for revenue, and the like, are in each instance peculiar, and are to be learned only from experience or continued investigation. True fiscal or revenue reform in the United States, where experience in dealing with a great debt and extensive taxation is very limited, and ten years ago was wholly wanting, must for many years be tentative, conservative, and somewhat in the nature of experimentation. It is only closet theorists, zealous partisans, and jack-of-all-trades who are ready to assert that the present fiscal system is all that it should be, or, on the other hand, that a new system may at once be framed and put in operation which shall remedy all difficulties. In short, there is at present sufficient work to be done in the way of revenue or fiscal reform which is practical, and the necessity of doing which all not blinded by prejudice or self-interest must admit, to obviate any necessity of constructing elaborate theories or to any great extent of anticipating the future; and it is in respect to just such work, and in combating the selfishness, the indifference, and the incompetence — both legislative and executive — which now array themselves in opposition to progress, that the advocates of revenue reform base their chief claim to popular support. The scope and nature of this present work, furthermore, is coextensive with the present most important economical requirement of the country, which, embodied in a single brief expression, may be defined to be *cheaper production*, and, as a necessary consequence, *larger consumption and more extended markets, domestic and foreign.*

To appreciate fully the truth and importance of this proposition, it is desirable to review briefly the leading incidents of our industrial and financial history since the year 1857, — the

the Treasury refused to allow the investigation to be undertaken, alleging substantially that it was not in accordance with the policy of the treasury to permit such facts to be made public.

year celebrated for its wide-spread commercial panic and disaster. In respect to the causes which led to those events it is unnecessary, for our purpose, to enter into any discussion. But it is most desirable to point out and recognize the wonderful celerity with which the country recovered from its financial disasters, and attained a high degree of industrial prosperity. Hardly had the smoke and dust of the fallen structures of credit and of fortune subsided, when the work of reconstruction began. The people, one and all, felt that the day of speculation and inflated values had at least, for a time, gone by ; and that the necessity for hard work and for the exercise of skill and economy had come, so that during the next three years, or from the spring of 1858 to the spring of 1861 inclusive, more substantial progress was made than in any equal period in the history of the country, either before or since. It was in that series of years that the commercial tonnage of the United States rose for the first and last time to upwards of five and a half millions of tons (5,353,868 in 1859-60, and 5,539,813 in 1860-61) ; that the annual crop of cotton exceeded five millions of bales (5,196,944 bales of 400 pounds each, United States census 1860) ; that the value of the exports of manufactured cotton approximated eleven millions per annum (\$10,934,796 in 1859-60 ; \$3,527,736 in 1870) ; while the nation at large purchased and consumed the largest *per capita* quantities of sugar, coffee, and cotton cloth. The number of miles of railway constructed and the number of cotton spindles put in operation during those years was also far greater than for any former equal period ; while the number of pounds of cotton which the manufacturers of the United States converted into yarn, cloth, or other products for the year 1859-60, exceeded the quantity consumed for the same purpose for the year 1870 by over fifteen millions of pounds, or forty-six thousand bales of 461 pounds each.*

During the same time our purchases and imports from foreign countries greatly increased, but our exports and sales of

* The consumption of cotton, North and South, for the year 1859-60 is returned at 928,043 bales, of the average net weight of 461 pounds per bale. The total consumption of the United States for the year 1869-70 was 881,861 bales of approximately the same weight.

domestic products and merchandise increased in an equal or greater proportion ; so that, during each of the years under consideration, the balance of indebtedness remained uniformly in favor of the United States ; our imports for the years 1858, 1859, and 1860 being \$282,000,000, \$338,000,000, and \$362,000,000, while the exports for the same periods were \$323,000,000, \$355,000,000, \$399,000,000, respectively, gold valuations.

American coarse cottons, supplanting the English, were rapidly becoming the standard foreign textile in the markets of India, China, Canada, and South America ; so much so, indeed, that the counterfeiting of American trade-marks was extensively resorted to by European manufacturers as a protective, though fraudulent necessity. The cane-bottom chair and other forms of light and graceful, but cheap, American furniture had come to constitute the essential equipment of nearly every well-to-do household in the British and Spanish American possessions, in Central America, South America, the Cape of Good Hope, and Australia ; while to all these same countries went annually, *in American vessels*, a steadily increasing supply of hardware, agricultural implements, boots and shoes ; one seventh part of our manufacture of fur and felt hats ; carriages, omnibuses, and street-cars ; cordage, fish-lines, and nets ; printing-presses, ink, and paper ; candles, gunpowder, wooden-ware, steam-engines, machinery of every description ; and last, but not least, garden-seeds and patent medicines.

Product being thus mutually and profitably exchanged for product, commerce flourished ; ships were employed ; domestic manufacturing industry extended and became diversified, and, what was more important, the increasing products of American agriculture found annually an increasing home market ; — the aggregate gold value of the breadstuffs exported for the four years ending June 30, 1861, having been only \$1,000,000 less than the aggregate gold value of the same products exported during the four years ending June 30, 1869, although the productive power of the country in respect to agriculture, owing to the increase of population and an increased use of machinery, was undoubtedly at least *thirty* per cent greater in the latter than in the former period. Let the advocates of special theories say what they may, facts and experience alike prove that

there never was a period in the history of the United States when wealth accumulated more rapidly and distributed itself more equitably, when the whole population was so actively and fully employed, and when the product *per capita* was so great as during the three years immediately preceding the outbreak of the Rebellion. And, as further evidence in support of this proposition, we would cite the testimony of Hon. Justin S. Morrill, who, in a speech as chairman of the Committee of Ways and Means, January 24, 1867, characterized the year 1860 as "*a year of large production and as much general prosperity as any, perhaps, in our history.*"*

And yet, strange to tell, the years under consideration were the ones in which the average rates of the tariff on the aggregate value of all imports ranged from 14.6 to 14.8 per cents ; and on dutiable imports from 19 to 20 per cent,— the very lowest, with the exception of the first few years of our national existence, that we have ever enacted ; and stranger yet is the circumstance that people and politicians alike took so little interest in the subject of the tariff, that a search through the records of Congress or the files of the leading newspapers of the period will hardly afford a single paragraph or allusion to the subject.†

And, as having an important bearing on two of the most difficult and vexed questions of the day, attention should be directed to two additional facts of not a little interest: the first of which is, that, during the years 1859 – 60, two iron sea-going steamers, of 1,150 tons' burden each, were constructed in the port of Boston on contract on terms as favorable as could then or now be obtained in Great Britain ; and the second, even more significant, that, during this period of low tariffs,

* Congressional Globe, Second Session, Thirty-ninth Congress, Part I p. 724.

† As it is for the interests of the advocates of certain theories to endeavor to question these statements, we give herewith, in tabular form, the imports, duties, and average rates of duty for the fiscal years 1858, 1859, and 1860 :—

IMPORTS.						
Years.	Customs.	Free.	Dutiable.	Total.	Per cent on Dutiable.	Per cent on Aggregate.
1858	\$ 41,789,621	\$ 80,319,275	\$ 202,293,875	\$ 282,613,150	20	14.8
1859	49,565,284	79,721,116	259,047,014	338,783,130	19	14.6
1860	53,187,511	90,841,749	279,372,327	362,166,254	19	14.7

when the cotton-manufacturing industry was increasing with unexampled rapidity, and the mills of the United States were spinning far more cotton than they are at present, the representatives of this same great industry in Maine, Massachusetts, and Rhode Island voluntarily reduced the hours of labor of their operatives from twelve to eleven, without reducing wages or materially diminishing product.

These facts, apart from their general interest, are of not a little significance : *first*, from the circumstance that they indicate most clearly what would be the condition of the country were its finances and industry in an altogether normal and healthy condition ; and, *secondly*, from the demonstration they afford that the country, from 1858 to 1860, inclusive, was, in a great measure, industrially independent, and that, too, notwithstanding that the difference in favor of Europe in the cost of the capital employed in manufacturing and in the wages of labor — taking the purchasing power of the wages into consideration — was as great then as now ; or, to put the case more forcibly, the country, commercially and industrially, had then assumed the offensive in respect to its trade with foreign nations, instead of, as now, standing wholly on the defensive.

The immediate effect of the war was a partial derangement and paralysis of domestic industry ; but, as large drafts were made upon the industrial classes to fill the ranks of the army, and as the demands for food, clothing, munitions of war, and the elements of transportation increased and became enormous, an artificial stimulus was soon given to every branch of domestic production, and every person, throughout the loyal States, who was willing to work, found employment at highly remunerative wages, while all who had anything to sell found a market at high prices.

Then it was that one characteristic of the typical American civilization, viz. that of adapting itself to circumstances and rising superior to accidents, was displayed as never before. Thus, notwithstanding the withdrawal directly or indirectly, during the years 1863–64 and 1864–65, of not less than a million and a half of able-bodied men from productive employment in the loyal States alone, and in great part from the business of agriculture, the yearly products of the soil and of

the workshop became greater rather than less ; machines were substituted in the place of men, while the practice of economy and the hours of labor were voluntarily increased. Thus, during the years 1863 and 1864, the number of reaping and mowing machines manufactured and sold in the United States were enormously multiplied ; while the State of Indiana, which, in 1859, produced 15,219,000 bushels of wheat, in 1863 increased her annual product to upwards of 20,000,000 bushels, and that, too, notwithstanding the circumstance that, in 1862-63, out of her population of 1,250,000, 124,000 fighting men were drawn to supply the ranks of the national armies.

Another interesting circumstance, to which public attention has not heretofore been particularly called, was the very great stimulus which, during the latter years of the war, was given to the exportation of certain articles of domestic product by reason of the very high premium on gold, which, being often from fifty to seventy-five per cent greater than the advance in the price of the labor and material employed in domestic production, increased the purchasing power of the foreign consumer ; or, what was the same thing, decreased the relative cost of such articles of American product as were available for exportation and sale in foreign markets.*

* As this circumstance is one of great interest, not only as a matter of history and as a contribution to the science of political economy, but also from the demonstration it affords of the impolicy of the existing and, we may say, the administrative and popular fiscal theory, viz. that it is desirable to reduce the premium upon gold, irrespective of any measure looking to a simultaneous reduction of the cost of domestic production through a reduction of taxation and the volume of paper currency, attention is asked to the following table, showing the comparative exports of certain articles of domestic product in the fiscal years 1859-60 and 1864-65, respectively :—

	1859-60.	1864-65.
Boots and shoes,	\$ 782,525 gold,	\$ 2,098,165 currency. ¹
Carriages,	816,973 "	1,622,780 "
Fruits,	206,055 "	1,001,802 "
Hemp cordage,	246,572 "	979,921 "
Other manufactures of hemp,	27,814 "	392,516 "
Nails,	188,754 "	947,658 "
Saddlery,	71,332 "	228,746 "
Trunks and valises,	50,771 "	209,868 "
Glass and glass-ware,	277,948 "	1,268,533 "
Bacon and hams,	2,273,768 "	10,536,608 "
Butter,	1,144,321 "	7,292,715 "
Cheese,	1,565,000 "	11,697,746 "
Tobacco (unmanufactured),	15,906,547 "	41,625,226 "
Locomotives and machinery,	9,948 "	3,510,192 "

¹ The average premium on gold for the fiscal year 1864 was 156 ; for the fiscal year 1865, 202.

With a reduction in the premium on gold consequent upon the termination of the war, the decline in the volume and currency value of many articles of export was equally noticeable: the export of boots and shoes declining from \$2,098,165 in 1864-65 to \$475,607 in 1868-69; of nails during the same period from \$947,658 to \$290,380; printing-presses and type from \$295,781 to \$64,544; and hats and caps from \$456,933 to \$96,744. In fact, the record of these changes constitutes one of the most interesting portions of our recent economical history; and the failure of our fiscal administrators to heed or to understand the inferences from this record has cost the country, as will be hereafter shown, for the last calendar year alone, a sum which cannot be directly estimated at less than from seventy-five to a hundred millions of dollars.

The termination of the war, in 1865, was also the occasion of immense industrial changes. The million and a half of men directly or indirectly engaged through the army in the work of destruction were returned to productive employments. The enormous demands of the government for service and supplies of every kind were almost immediately terminated; while the decline in the premium on gold, as above stated, occasioned a most marked falling off in the volume and value of many articles of domestic export.

Various agencies, however, at once came into action to prevent that stagnation and derangement of the business of the country, which, at first thought, would seem to have been almost inevitable. The stock on hand of agricultural products had been reduced to a minimum, owing to the enormous consumption of the men and animals of the army, to a partial failure of the crops, and to an unnaturally stimulated export; and, with the exception of cotton and woollen goods, there was no accumulation of the products of the so-called manufacturing industries. The South, with its population of twelve millions, was, moreover, destitute of nearly everything essential to render possible the continuance of civilization or even life itself; and yet the South, through its retention of cotton, was in a condition to purchase largely and pay promptly for its necessities; as is shown by the fact that the export value of *unmanufactured* cotton advanced from the small sum of \$6,836,000 in

1864-65, to the large amount of \$281,000,000 in the succeeding year 1865-66.

In addition to these circumstances, which afforded large opportunities for the profitable employment of labor, the disbursements of the government for arrears of pay, bounties, pensions, and the settlement of contracts during the three years immediately subsequent to the war, in themselves constituted a very great stimulus to consumption, and were therefore equivalent to the creation of new domestic markets or to the continuance of those previously existing. The amount thus disbursed from the 1st of April, 1865, to the 1st of June, 1869, was in round figures about \$700,000,000; a great part or all of which was immediately invested in the purchase of food, clothing, shelter, implements, transportation, or business, and really constituted a fund on which the men of our volunteer army re-established themselves in the pursuits of peace.

It is therefore obvious that it has not been possible for the country, until within a comparatively recent period, to resume its natural industrial relations, or to determine by actual experience the full effect of the burden of its increased taxation, or of the laws and methods under which such taxation is imposed and collected. But the time has come when such an examination can be properly instituted; and when, exceptional disturbing causes having ceased, we may determine our present economical position, and with a reasonable degree of assurance forecast the future.

No one would have a right to expect that the country, after experiencing a gigantic war and incurring an immense debt, would at once recover all it had lost, or that, having sown the whirlwind, it could escape reaping the storm. But for the time let us put aside the question of drawbacks and liabilities, and, like prudent merchants, take account of our resources and capacities, in order to see what we may legitimately expect in the future.

We are a nation of forty millions, unsurpassed in intelligence, indomitable in will, fertile in expedient. Our territory, washed by three oceans, and extending from the arctic to the tropics, is too vast for most persons even yet to realize that its geographical centre is not far from the head-waters of the Columbia River,

and is eight hundred miles west of the Mississippi. Its variety of soil, of climate, and of crops is so great and its means of intercommunication so ample, that a deficiency of food which, in other countries, is ever a source of anxiety, is, in the United States, a matter of impossibility, inasmuch as the very conditions which result in injury to one staple in one section are productive of benefit elsewhere to another. We have a form of government in which the will of the people constitutes the law. We have a thousand million acres of fertile land as yet unoccupied. We have an annual immigration of 350,000, mainly persons who have passed the age of childhood, ready to occupy, to produce, to consume, and pay taxes, and whose annual money value to the country cannot be estimated at less than \$300,000,000. We have the largest area of land in the world especially adapted to the cultivation of cotton, but of which not three acres in a hundred have ever, at any one time, been put under cultivation. We have more coal, the source of motive-power, than is possessed by all other countries together. In short, we have all the conditions under which labor can attain its maximum of productiveness, and capital receive its greatest reward. Therefore, if there is any place on the earth where labor and capital can and ought to harmonize, that place is the United States ; and if to-day they are not in harmony, the obstacles are all artificial, not one natural. Pauper labor, moreover, so often ranted about and so often prophesied, cannot exist, and never has existed, except through man's ignorance and shiftlessness, in any country where fertile land can be had for the occupation or purchased by the acre at less than an average day's wages ; for the free possession and cultivation of fertile land always insures to its possessor a generous support : and when manufacturing or other occupations afford less than this, the tendency will be to quit the latter and embrace the former.

Such, then, is a partial statement of the conditions under which the nation exists. They are more favorable than have ever been bestowed upon any other people. They bring prosperity, great and abiding, which, as experience shows, even the calamity of civil war can only check, not destroy. But right here it is especially important to note and bear in mind that

these conditions of prosperity are in the main natural, the gift of God, entirely independent of laws, certainly of any recent legislation, and that the prosperity they entail would be essentially the same whether the government was free or monarchical, or its administration Republican or Democratic. This proposition is the more worthy of attention, since, as we believe, it is the want of a clear appreciation of its truth that to-day offers the greatest obstacle to the attainment of a much larger prosperity and a much greater degree of national progress ; the inevitable results of natural growth being constantly and most impudently put forward as the consequence of legislation, when, if the whole truth were shown, it would be found that nearly every instance of growth that can be cited within the last ten years has been made in spite of legislation, and that legislation, so far from having helped to national progress, has really been only a hindrance. And this unfounded assumption, this connecting together as cause and consequence results which have legitimately no such connection, more than all else blinds the nation to its true material condition, and is held to absolve us from the necessity of investigation and reform.

We look for plenty, and we find an almost universal complaint, among the producing or laboring classes, that the receipts from income or wages are entirely disproportionate to the expenses of living. We enumerate our resources and predicate abundant employment for all willing to work, yet we find enforced idleness, ships unemployed, commerce departing from its old and legitimate channels, producers of great staple articles complaining that they are working to no profit, imports increasing, and exports of domestic manufactures relatively decreasing, trade dull, collections difficult. We feel that we have a right to look for harmony between labor and capital, because we are certain that natural conditions in the United States are such as ought to secure for both an ample reward ; and instead of this, we find antagonism, strikes, combinations, trade-unions, suspension of production, although those who advocate these measures in Europe frankly confess that they discover no similar necessity for the same in the United States. We would point to the further most singular fact, that during the last few years the representatives of almost every indus-

trial profession in the country — the manufacturers of cotton, of wool, of pig-iron, of boots and shoes, of coal, of salt, and of petroleum ; the miller, the lumberman, and the hatter ; the makers of paper, of glass, and of nails — have met in convention and resolved that it is expedient to diminish production : as if there could be any such thing as over-production so long as there were any hungry to be fed, naked to be clothed and warmed, or homeless to be sheltered ; or, as if abundance of any of the necessities and comforts of life could ever be anything but a blessing. We find, furthermore, notwithstanding our vast resources, that out of all our multiplied products there are practically only two or three which cannot be produced under more favorable circumstances elsewhere, viz. cotton, gold, and petroleum, and that any advantage we may have in respect to these is due to natural causes rather than to our own efforts, and extends no further than to the material in its most elementary or unelaborated condition.*

Now it neither avails anything nor is it pertinent to attempt answering these statements by referring to our constant increase in wealth, product, population, and territory, or to fall back with the Secretary of the Treasury in opinionated self-complacency upon the circumstance that he knows of somebody in the back country of Massachusetts who had two pigs and three hens last year, while ten years ago the same person had only one pig and no hens ; that as he looks out of the car windows, in travelling from Groton to Washington along the richest and most densely populated section of our country, he observes every one busy ; and that after he gets to Washington he finds the revenues from taxation coming in without interruption. Neither will it much longer be considered satisfactory to say, with the President, that there is gold enough in the Rocky Mountains and profit enough in San Domingo to pay the national debt and

* The value of the exports of the United States for the calendar year 1870 is returned at \$ 506,000,000 currency, of which the following constitute the principal items: cotton, \$ 219,373,000 ; petroleum and other oils, \$ 37,692,000 ; bullion, \$ 66,097,000 : total, \$ 323,162,000. If to this we add the value of the breadstuffs exported, \$ 65,000,000 ; tobacco, \$ 18,000,000 ; provisions, \$ 29,000,000 ; and oil-cake, \$ 3,768,140, the total aggregate becomes \$ 439,000,000, leaving but a comparatively trifling amount to represent the value of the exported surplus of all other industries.

make us all rich ; as if a dollar earned in Arizona, or in a fever-stricken island of the tropics, that for two centuries has resisted all attempts at civilization, were worth any more than a dollar created by raising wheat in Iowa, packing pork in Cincinnati, or making shoes in Massachusetts, especially when the mining statistics indicate that every dollar taken from White Pine has cost the country a dollar and a quarter to get it ; and history proves that all the wealth that has ever been gained from San Domingo has been watered with tears, crusted with blood, and wrung from unwilling labor by the lash.

In opposition to these views of the administration, a very ugly series of statistics may be presented. Thus, if we take as one measure of national prosperity the comparative use and demand for sugar and coffee, we shall find that the consumption of each of these staple articles was considerably less *per capita* in 1869 than it was in 1859, although, during the intervening ten years, four millions of blacks had passed from a condition of non-consumers to that of consumers.* Manufacturers and dealers also state that our people use a comparatively smaller number of boots, shoes, and hats now than they did before the war ; while it is positively known that the consumption of cotton cloth (measured in pounds) was less in the United States during the year 1870, with 39,000,000 of people, than it was in 1859, with 30,000,000.

What answer, we would ask, is to be made to these statements ? Do our people like sugar and coffee less now than then ? Have their necessities and uses for boots, shoes, hats, and cotton cloth been obviated by any change in climate or by the introduction of a new civilization from San Domingo ? Or is it that our population desire and require these things no less, but have less of ability to purchase and obtain them ?

Or, as bearing upon the general business of the country, what is to be said of the circumstance that the mercantile

* Consumption of sugar, 1859, (Atlantic slope)	965,852,160 lbs.
“ “ 1869, “ “	1,104,093,760 “
“ coffee, 1859, “ “	99,380 tons.
“ “ 1869, “ “	108,479 “
Population, 1859,	30,000,000
“ 1869,	38,600,000

See Moring's (New York) Commercial Sugar and Coffee circulars.

agencies report the business failures for 1870 as twenty-five per cent in excess of those of 1869, and *thirty-three* per cent in excess of those of 1868; or, to use their own language, "that the surplus which has been added to the wealth of the mercantile community by the results of the year's transactions is very trifling." A conclusion which also finds confirmation in the fact that the returns of the New York clearing-house for the year 1870 show that, although the bank loans of the year fluctuated widely, yet they averaged no higher than they did two years before, or in 1868,* although from 1850 to 1860 the increase in the business of the country, if measured by the reported increase of wealth, would seem to have been in excess of ten per cent per annum.

Take another series of facts. No nation or community produces all that is essential to its civilization and comfort; but Providence, as though desirous of enforcing the doctrine of the universal brotherhood of man, has bestowed upon particular regions particular or exclusive advantages in the way of production, and has thus made nations and men mutually interdependent. Hence has arisen what we term commerce, or the exchange of product against product, the results of one man's labor here for the results of another man's labor there. It is upon this basis that New York exchanges with Ohio, and Ohio, in turn, with California. It is upon this basis that Great Britain, France, and Germany, and even Brazil and the Sandwich Islands, carry on their commerce. But the United States, in respect to its foreign trade, has had of late a way peculiar to itself. Disregarding the maxim of its earliest political economist, "Pay as you go," it buys every year from foreign nations a good deal more than it pays for with the products of similar industries, and gives its obligations in various forms for future settlements; all of which, however, may be the sign of a new civilization. But it pays in part for its annual purchases, and pays for them how? With such of its products as represent the highest intellect and skill of its people, and, of course,

* It should not in fairness be overlooked, in this connection, that the difference of fifteen per cent in the value of the greenback dollar, as between January 1, 1868, and January 1, 1871, shows that the fall in the gold premium, involving a fall in prices generally, materially diminished the amount of loans required for carrying the same quantity of commodities.

its most highly remunerated and intelligent labor? Not at all; but, in major part, with its most crude and unelaborated raw materials, three fourths of which represent the gifts of God, and the other *one fourth* labor, but labor of the most unskilled and poorest paid description; and altogether it presents a type of commercial exchanges characteristic of nations but one remove from barbarism.

But the treasury tells us, in its monthly bulletins of exports and imports,—for the accuracy and fulness of which we would give all credit,—that affairs are improving; and the country is, from time to time, congratulated that trade and exchanges are returning to their old and normal condition. Now it must be admitted that there has been of late an improvement. We had more of cotton and petroleum to sell during the last calendar year than the year before; and the necessities of the French required them to buy of us—for the reason that they could not, for the time being, buy elsewhere—a large amount of arms and munitions of war, so that we increased our exports of merchandise about fifty millions for the year 1870.

But let us examine the details of last year's business. Leaving for a moment the movement of specie and bullion out of the account, it will be found that we bought of foreign merchandise for the year 1870 to the (specie) value of \$461,000,000; and that we gave in exchange for it domestic merchandise to the (specie) value of \$387,000,000 and foreign merchandise previously bought of somebody else to the value of \$16,000,000 additional, leaving an adverse balance on the merchandise account, to be settled in some other way, of about \$58,000,000. We shall also find that foreign nations did not want so much of our breadstuffs as they did the year previous, by \$10,000,000; of tobacco, by \$8,000,000; of hops and naval stores, by \$3,000,000; while of our domestic manufactures generally they seem to have wanted little of any kind. And it is furthermore to be noted, as a matter of not a little significance, that while in 1869 about 73 per cent of all that came into or went out of the country was carried in foreign vessels or vehicles, in 1870 the proportion thus carried had increased to nearly 80 per cent.

But this is by no means the whole story. We owe abroad

on national account about \$1,000,000,000, funded debt; and on account of railroads and other corporations about \$600,000,000 more. On the national part of this debt we pay our interest regularly; on the remainder we pay on part, and on part we do not pay; but the whole aggregate of annual interest for which we feel bound to provide cannot be less than \$80,000,000. If to this we add \$24,000,000 to represent the excess of freights carried in foreign bottoms,—a very low estimate,—and as much more to represent the excess of annual expenditure of Americans travelling abroad over the expenditures of foreigners travelling in the United States, and deduct \$30,000,000—a large estimate—to represent the specie brought in by immigrants, we have an annual aggregate balance of at least \$156,000,000 accruing indebtedness; which was settled last year by exporting \$56,000,000 net of specie or bullion, or \$23,000,000 more than the previous year, and going into debt for the balance.

Now, while no writer of any of the modern schools of economists supports or indorses in any degree the old balance of trade notion, that a nation, in order to be prosperous, must always export more than it imports; and while we must recognize to the fullest extent the truth of the proposition that gold is as much the product of our industry as wheat, cotton, or petroleum, and that there is no better use that can be made of it than to pay our debts, must we not at the same time frankly confess to a feeling that we do not altogether like that condition of things which induces foreign nations to require of us gold in the settlement of exchanges, rather than cloth, furniture, or hardware; and that too, not because they want our gold in itself more than they do our cloth, our furniture, and our hardware, but because they know that our gold will buy much more of these same articles in some other market than it will in our own: and as Americans and friends of our industry, would we prefer that condition of affairs which would foster those branches that require the most diversified and skilled labor rather than those in which chance, as in mining, constitutes an element of success, or in which the most unskilled labor stands on a par in the way of production with that which is the best paid and most intelligent?

But as showing more clearly the abnormal condition of our present system of foreign exchanges, let us take as example the trade between the United States and the Argentine Republic of South America,—an example, although before made use of, is nevertheless always pertinent. The necessities of trade between the two countries belong in the first instance to the United States, for we have not a supply of domestic hides sufficient to meet our consumption of leather; and in addition, have practically no supply whatever of either goat-skins or horse-hair. The Argentine Republic has these articles especially to sell, and if she is willing to dispose of them on terms equally advantageous with other nations, it is not a matter of choice on the part of the United States whether she will trade, but a matter of necessity.

It is also worth while to diverge for a moment from the subject under consideration, and see how important is this supply of foreign hides to domestic industry, and how good a thing the United States makes of it. Thus the value of all the hides and skins annually used in the United States, both foreign and domestic, is about \$70,000,000; but the value which labor and capital adds to these same hides and skins when they are manufactured into boots and shoes, trunks, harnesses, saddlery, and the like is at least \$225,000,000; the major part of which large sum represents the wages paid to the 180,000 operatives engaged in these branches of manufacture,—a number far greater than is employed in any other special department of domestic industry.

As might be inferred from this showing, the United States continues to purchase hides from the Argentine States, and continues to add to her wealth and to the sources of employment for her people by doing so; but in thus purchasing we find that the United States stands on a different footing from other commercial nations. Thus the Argentine States in sending us hides and skins require an equivalent; they have no forests, few manufactures, and an insufficient supply of bread-stuffs; they therefore require lumber, flour, textile fabrics, especially coarse cottons and calicoes, furniture, ready-made clothing, wagons, hats, boots and shoes, saddlery, paints, paper, hardware, and a thousand other articles which the United

States is capable of producing in almost unlimited quantity, is very desirous of selling, and with many of which, furthermore, it has been claimed that our markets are glutted by over-production. The people of the Argentine Republic, moreover, do not desire payment for their products in the precious metals, and, if obliged to receive them, must immediately exchange them for the commodities named, which are absolutely essential to their existence as a civilized people. Now, as the United States stands to the Argentine Republic in the relation of its best customer, and as the two nations are closely assimilated to each other through continental position and a common form of government, and as the former is especially capable and desirous of supplying to the latter the commodities which it absolutely needs, it might naturally be supposed that the trade between the two would be reciprocal. But the contrary is the case. The United States bought, in 1870, upwards of *three* dollars' worth of Argentine productions for every one of domestic product sent in return; or \$6,414,600 imports, *gold valuation*, in 1870, as compared with \$2,281,000 exports, *currency valuation*, in the same year; while in the case of Great Britain the average of imports into the Argentine States for the last few years have been four times greater than the exports received from the latter country: thus indicating that the adverse balance in the exchanges of the United States with the Argentine Republic is settled in the first instance by Great Britain.*

* A recent writer, indorsed by the New York Tribune, has endeavored to show that this illustration amounts to nothing as an argument, for the reason that the exports from the United States to Buenos Ayres have increased during the last few years, and are apparently more favorable than they were previous to the war. But this pleading is a mere attempt to avoid the real issue presented; for making whatever allowance we may for an increase of exports from the United States to Buenos Ayres, the fact nevertheless remains, that the balance of exchanges in this trade for the year 1870 was unfavorable to the United States in the ratio of three to one; and as further showing how dangerous a little knowledge is on these subjects, the critics referred to have overlooked the fact that a very considerable part of the export trade of the Argentine States with the United States, namely, wool, has been in a great degree destroyed — prohibited — by the wool tariff of 1867; and that if we had imported from the Argentine States in 1870, in addition to other articles, the proportion and value of wool imported in 1865, the balance of exchanges between the two countries would have been even more unfavorable in 1870 for the United States than it was during 1859.

This result is due, not to any unwillingness on the part of the people of the Argentine Republic to exchange product for product with the United States, but simply and solely to the fact that the prices of nearly all commodities in the United States are so much higher than in all other markets of the world, that reciprocal trade with the South Americans is both disadvantageous and impossible. But the United States must have the hides and the skins and the horse-hair, and being unable to procure them in exchange for its cloth, its furniture, its flour, and its hardware, obtains them in this way: not by sending gold and silver direct to Buenos Ayres, but by purchasing, in the first instance, a bill of exchange on London, paying a banker's profit, and probably effecting the purchase to a greater or less extent by selling at a discount the government's or a railroad's obligation of indebtedness. The debt thus transferred to Great Britain is settled by the exportation to Buenos Ayres of British manufactures, paying another profit, in British vessels paying freights and commissions; and when the British vessel has discharged her original cargo, she loads again with hides, skins, and horse-hair for the United States, while American vessels remain unbuilt and unemployed, and American manufacturers meet in convention and pass resolutions declaring that there is an over-production. And this peculiar and unnatural commerce, which has been described in detail as regards the Argentine States, goes on in much the same way month after month and year after year with other foreign nations, until there is not now one single country with which the United States exchanges on terms as commercially favorable as it did in 1859-60.

In proof of this we ask attention to the following statistics:—

GREAT BRITAIN.

	1860.	1869.
Exports, domestic produce,	\$ 196,260,000 gold.	\$ 163,195,000 currency.
Imports,	138,596,000 "	201,799,000 gold.

SPANISH WEST INDIES.

Exports, domestic produce,	\$ 13,713,000 gold.	\$ 15,479,000 currency.
Imports,	41,450,000 "	69,903,000 gold.

SWEDEN AND SWEDISH WEST INDIES.

	1860.	1869.
Exports, domestic produce,	\$ 1,513,876 gold.	\$ 166,974 currency.
Imports,	532,984 "	1,103,611 gold.

MEXICO.

Exports, domestic produce,	\$ 3,338,739 gold.	\$ 3,836,000 currency.
Imports,	6,935,872 "	7,232,000 gold.

SANDWICH ISLANDS.

Exports, domestic produce,	\$ 637,489 gold.	\$ 700,962 currency.
Imports,	367,859 "	1,298,085 gold.

CANADA.

Exports, domestic produce,	\$ 18,667,000 gold.	\$ 17,765,712 gold.
Imports,	23,851,000 "	39,507,842 "

In respect to the remarkable change in the trade between the United States and Canada shown in this accompanying table, Mr. J. N. Larned, in his "Report on the State of Trade between the United States and the British Possessions in North America," made to the Secretary of the Treasury, February, 1871, says:—

"Down to the close of 1862, when the derangement of the currency, the inflation of prices, and the disturbance of industries, produced by the war, began to work their effects, we had been selling the Provinces largely in excess of what we bought from them. The aggregate of their imports from us during the nine years ending with 1862 — eight of which were the years of the reciprocity treaty — was \$ 172,641,372. The aggregate of our imports from them in the same period was \$ 133,230,473. The balance of trade in our favor was \$ 39,410,899. But in 1863 the balance shifted to the other side, and ever since the preponderance against us has steadily and rapidly increased, until now we are exchanging commodities for little more than one half that we buy from the British Provinces. Indeed, the exchange of our own productions covers less than one half of the amount that we are importing from the Provinces.

"Comment upon the unsatisfactoriness of this state of trade seems to be quite unnecessary. The adverse balance is vastly too great to be analyzed into commercial 'profits,' as an apparently adverse balance of trade often is; and, moreover, the mode in which it is here arrived at, by comparison of the import entries in each country from the other, excludes almost all the elements of such analysis."

The following table also exhibits the reduction which has taken place in the export of certain products of domestic industry, comparing 1860, the year before the war, with 1869, the last year for which the returns are readily accessible:—

	Exports, 1860, gold.	Exports, 1869, gold.
Boots and shoes,	\$ 782,525	\$ 356,290
Wool and woollens,	389,512	237,325
Carriages,	816,973	299,487
Candles,	760,528	324,995
Pot and pearl ashes,	882,820	187,004
Books and paper,	564,066	290,098
Manufactured tobacco,	3,337,083	2,101,335
Soap,	494,405	384,950
Trunks and valises,	37,748	24,800
Paints and varnish,	223,809	91,452
Gunpowder,	467,972	122,562
Manufactures of marble and stone,	176,239	65,515
" " india-rubber,	240,841	128,216
Beer, ale, and porter,	53,573	9,755
Garden and other seeds,	596,910	44,186
Hides and skins,	1,036,260	219,918
Animals,	1,855,091	689,508

Now, this whole trade exhibit, notwithstanding all that may be written and said in respect to the advantage of using the cheap capital of other countries, has a bad look; *bad*, because it is not the way in which we formerly did business,—*bad*, because it is not the way in which Great Britain, France, Belgium, Germany, and Holland conduct their foreign exchanges; *bad*, because it means debt, for which obligations of future payment, bearing annual interest, are given in settlement; *bad*, because it tends to strengthen and increase a present national tendency towards debt,—debt national, debt railroad and corporate, debt municipal and individual.

We certainly should look with some distrust upon the management of a farmer who, with plenty of the most fertile land and abundance of labor standing ready and anxious for employment, should borrow money for the purchase of wheat, corn, and cabbages for his own consumption; and, although he might prove that it was for his advantage to adopt this method of procedure, we should still think it worthy of inquiry, whether the conditions which thus made it for his advantage were not in themselves forced and unnatural. And then, again, in com-

mon with many, we have a desire, but little expectation, that we may, during the next quarter of a century, get back to the recognition and use of a real standard of value in making our exchanges ; but there is clearly no chance of maintaining specie payments, even if we should once resume, so long as our annual obligations to foreigners for indebtedness, over and above the value of all ordinary merchandise appropriated in liquidation, exceeds *three* times our whole annual product of the precious metals, and so long, moreover, as our legislation makes it an advantage to our foreign creditors to receive specie in payment, or acknowledgments of debt on which there is to be a continually accruing burden of interest.

Again, what a terrible exhibition do the statistics of our commercial marine present, comparing 1870 with 1860, and remembering that the population of the United States has increased at least twenty-three per cent in the interval. We ask attention to them.

Total registered and licensed tonnage :—

1860-61,	5,539,813
1869-70,	4,246,507

Tonnage employed in the coasting trade, which by law is protected from all foreign competition :—

1860-61,	2,657,292
1869-70,	2,595,328

Tonnage employed in the cod-fishery .—

1860-61,	127,310
1869-70,	82,612

Tonnage employed in mackerel-fishery :—

1860-61,	80,596
1866-67 (last return),	31,498

Again, it appears from statistics published during the present year by the Treasury Department, that prior to 1862 the tonnage of American vessels entered at the ports of the British Empire was double the tonnage of British vessels entered at ports of the United States, but that since 1865 the tonnage of British vessels entered at ports of the United States has been double the tonnage of American vessels entered at ports of the British Empire.

In 1860 the number of entries in the trade between the United States and Brazil comprised 345 American and 118 foreign vessels ; in 1869 this proportion had changed to 114 American and 359 foreign. In 1860 there were 68 entries of American vessels in the trade between the United States and the Argentine Republic, and 8 foreign ; in 1869 the proportion was 39 American and 33 foreign. In the direct trade with Great Britain, the entries for 1860 were 924 American and 613 foreign ; in 1869 the figures were 365 American and 1,391 foreign. In all history it would be difficult to find an instance where any nation has experienced, in so short a time, commercial changes of the magnitude indicated, and yet continued to exist with any degree of national strength and prosperity.

Take another illustration. Since 1860 the business of manufacturing boots and shoes for *general use* has been almost completely revolutionized. Instead of being the result of the labor of men working upon a bench in small shops or apartments, with awl, lapstone, and hammer, it is now carried on in immense factories, with such perfection and adaptation of machinery, that a pair of boots or shoes can be made in less time than it requires a visitor to inspect at leisure the processes ; while the increased power of production with a given amount of manual labor has been at least twenty-five per cent. The writer visited one of these large establishments in Massachusetts during the past year, and, after having seen the industry of the United States and of Europe under circumstances perhaps more favorable than have ever before been granted to any one individual, he must confess to having never experienced a greater interest than in witnessing the ingenuity, rapidity, and economy of the working there exhibited. When the leather is first received, instead of being hammered to compact it, it is rolled ; instead of the several pieces which compose the boot or shoe being cut and trimmed by hand, they are cut to a pattern by dies, or punches. If the work is to be pegged, a single machine makes the pegs, punches the holes, drives the pegs, automatically adjusts the shoe to the progress of the work, and stops of its own accord when the pegging is complete. If the work is to be sewed, a machine performs it so rapidly that the

eye cannot follow the formation of the separate stitches. In like manner, by machinery, are the heels adjusted, fastened, and trimmed, the uppers blacked, and the soles smoothed and polished ; one man, in this last department, doing with greater ease what formerly would have required the labor of twenty men. After a careful inspection of all these new processes, the writer went to the counting-room and said to the proprietor, "I have witnessed the marvellous perfection, skill, and economy of your manufacture ; please look at your books and tell me how the present cost of a case of boots or shoes, reckoned in gold, compares with the cost of the same in 1860." "There is no necessity," was the reply, "for me to look at my books. I know that it is at least *thirty* per cent greater now than it was in 1860." Or, in other words, something has come in since 1860 which has not only completely neutralized the whole benefit of this marvellous invention and adaptation of machinery, but has added thirty per cent to the cost of one of the most indispensable articles of domestic consumption. A few days later, in the city of New York, the writer fell in with one of our most experienced engineers and machinists, who had recently visited England for the special purpose of investigating the cost and conditions of iron ship-building. He stated that, since 1863-64, the wages of the workmen employed in this business in Great Britain had advanced about fifteen per cent, but that, notwithstanding this, owing to the use and improvement of new machinery and the better application of knowledge, the cost of construction had materially decreased ; or, in other words, taking the two industries alluded to as the basis of comparison, the result of the last ten years in the United States has been to decrease the purchasing power of wages, increase the cost of the manufactured product, diminish consumption, and prevent exports ; while in Great Britain the result has been an increase of wages, a decreased cost of the finished product, an increase of consumption, and a very large augmentation of exports.

The writer also obtained another illustration to the same effect from Mr. Mundella, the well-known hosiery manufacturer of Nottingham, England, and a member of Parliament, who, it will be remembered, visited this country during the autumn of

1870. This gentleman ascertained, as one result of inspecting the manufacture of hosiery at Lawrence and Philadelphia, that the difference in favor of Europe in the cost of the paper boxes or cartoons for a dozen of circular or machine-made stockings was more than the average profit on the dozen of such stockings in Nottingham or Germany, although, through the application of machinery and labor-saving processes in the United States, we can turn out a better and more symmetrical box in much less time than the same can be produced elsewhere. And, as pertinent to the same subject, it may also be stated that, when Mr. Mundella was in the United States, he was repeatedly waited upon by skilled workmen formerly in his employ, and expressly brought over by American corporations, with a request for their old opportunities for employment, on the ground that, taking the purchasing power of wages into account, their labor was better remunerated in the old country than in the new.

We will present one more picture. In the spring of 1867 the writer visited a pier on the North River, in the city of New York, for the purpose of witnessing the embarkation of some friends for Europe. The steamer was the *Fulton*, the companion of the *Arago*, on the old New York and *Havre* line, — a vessel faultless in marine architecture, built some years previous to the breaking out of the war, and repaired after the war at an expense of several hundred thousand dollars. She was a noble and a favorite vessel ; and the writer well remembers, as he saw her majestically move off, that his heart swelled with pride at the thought that the American flag was yet borne by one first-class merchant steamer on the ocean. In March, a year ago, an errand for information took the writer to Mr. John Roach, of the Morgan Iron-Works, on the East River, and noticing a large steamer at the foundry dock, it was proposed to visit her. It was the same steamer *Fulton* in the process of demolition. Men in the cabin were stripping off the costly panelling, in the hold disconnecting the machinery ; while old-junk men and small traders were bargaining and huckstering for the furniture of the state-rooms and the appurtenances of the galleys and of the pantries. "How is this ?" it was asked. "Is the vessel worn out ?" "Not at all," was

the reply. "A few thousand dollars would make her as good as new, but there is no use for her. I took her for a debt a short time ago. I have offered her for sale repeatedly for \$25,000, and finding no purchaser, I have concluded to break her up and sell her material as the only way to save myself. Look at those anchors and chain cables, the very best originally, and just as good now, but no one in New York will make me an offer for them, for there are no vessels building in the United States large enough to require them, and no one can tell when there will be. And more than that," he continued, "ten years ago, within the radius of half a mile from where you now stand, there were at least 15,000 workmen directly or indirectly employed in building or repairing marine engines or other machinery of vessels and steamers. To-day, out of all the great establishments that then existed,—the Allaire, the *Ætna*, the Continental, the *Novelty*, and others,—there is only one left, and that employs but about 700 workmen on work of a miscellaneous description."

Now how are such results as have been detailed to be accounted for? What has happened since 1860 which has driven our flag from the ocean, closed up our machine-shops, wiped out of existence great branches of industry, increased the cost of our products, diminished the purchasing power of wages, and rolled up annually a heavy balance of indebtedness against us and in favor of foreign nations?

In general three causes or agencies may be specified,—*a large debt, increased taxation and expenditure, and a vicious and unsound currency.*

Dismissing for the present the last-named agency as something which merits a separate and independent discussion, and merely remarking that it is now the nearly unanimous opinion of those who, from a practical and theoretical point of view, have given the subject the most attention, that the evil and disturbing influence of the present currency upon the industry and progress of the nation cannot well be underrated, let us examine the influence in the same direction of the recent increased debt, taxation, and expenditure.

Our debt, as we all know, is large, but the interest-bearing portion of it is only about one half as large as that of

Great Britain,* our great commercial rival. We have heavy taxation, but our taxation, *per capita*, by reason of the interest on the *national* debt, is much less than that of Great Britain, or in about the ratio of twelve to sixteen. Deducting furthermore the amount appropriated for the principal of the public debt, the annual expenditures of the United States — for interest and all other purposes — for 1869–70 were less than those of Great Britain for the same purposes by at least sixty millions of dollars.† Our climate since 1860 has not changed in character; our soil has not lost its fertility, or our crops their variety; neither have any of our natural resources been materially diminished. On the contrary, they have in some respects greatly increased, for we have twenty-five thousand more miles of railway than we had in 1860, and eight millions more of population to help us to pay the debt and taxes; and we are adding to the number of our producers and tax-payers at the rate of over one million per annum.

The debt itself, then, and the taxation necessary to pay the interest upon it and provide for the government, cannot in themselves constitute a sufficient cause for the results we have specified. Neither can *local* taxation in general be assigned as the main reason for the increased cost of national productions; for heavy as are these latter taxes, their increase has been on the exchanging and consuming population of the great cities rather than on the producing population of the towns and villages of the country, as is strikingly illustrated by the circumstance that, while the *per capita* taxation of the whole State of New York is the largest, with the exception of Massachusetts, of any State in the Union, the *per capita* taxation of so much of her population as lies outside of her seven or eight leading cities, and represents three fourths of the people of the State, runs down to almost as low an average as in Vermont, which is the most moderately taxed State of the Union.

But, nevertheless, the question at issue is not a matter of

* Debt of Great Britain, 1870, £793,000,000 (\$3,965,000,000); interest-bearing debt of the United States, April 1, 1871, \$1,968,000,000.

† Total expenditures of the United States for 1869–70, exclusive of payment of the principal of the public debt, \$309,653,000. See Report of the Secretary of the Treasury. Total gross expenditure of Great Britain, 1868–69, £75,497,000 (\$377,485,000).

mystery, and there is no occasion to deceive ourselves in relation to it; for apart from the currency, we can put our finger upon the exact source of our difficulties, and declare the whole secret from the beginning. It is not the debt; it is not the necessary burden of taxation incumbent upon us, but the method by which taxation is levied and collected,—a method which takes far more from the people than the treasury ever receives or needs, and which blights a harvest it cannot gather.

An inquiry into the origin and maintenance of this defective method will show that it in part results from the ignorance and incompetency of those to whom the business of financial legislation is intrusted, and in part from selfishness and design. The present Secretary of the Treasury does not hesitate openly to avow his belief that there is no such thing as a science of political economy; and, as might naturally be expected from a person with such opinions, he adopts as the basis of his financial policy the principle that the prosperity of a great nation can be best promoted by the maintenance of an excessive taxation, or, what is the same thing, excessive deprivation.

Mr. John Sherman, the chairman of the Senate Committee on Finance, in a speech delivered last year in Ohio, declared that he was unable to recognize any difference between a tariff for revenue and a tariff for protection; and that, too, when he could hardly name an article in the tariff, on which duties had been levied mainly with a view to protection, in respect to which there had not been, not only a resulting loss to the treasury, but a heavy burden of indirect taxation entailed upon the people; while General Grant, in a message which the London Spectator declared to be the most idiotic of state papers, gravely assured the country that the employment of foreign vessels, carrying freight at lower rates and with greater despatch than American vessels could carry it, "*was equivalent to throwing money into the sea,*" as if the Yankee nation had forgotten the good old maxim of their fathers, "*that a penny saved was as good as a penny earned,*" and needed instruction to the contrary. And when we look back on the record of individual effort in the last few years of Congressional ses-

sions, there is much to remind us of that monarch of England, Charles II., who was called merry but never wise, who concluded one of his speeches to Parliament by saying: "*And pray do not forget to contrive some good short bills, which may improve the industry of the country; and so God bless your councils.*"

In truth, the war and its necessities brought to the surface a class of men who were the beetles and the wedges by which the system of slavery and its abominations was cleft asunder, crushed, and destroyed ; and as beetles and wedges they did the work that was expected of them, did it well, and are entitled therefor to the thanks of the country. But now that the war is over and slavery become a thing of the past, these instruments are as little adapted to the reconstruction of our finances and the development of our resources as would be crow-bars and sledge-hammers for the adjustment and regulation of marine chronometers.

But a more immediate influence in creating and maintaining the existing methods of taxation is to be found in the assumption, no doubt in many cases honestly accepted, but more frequently maintained through pure selfishness and the greed of money-getting, that whenever a tax or rate of duty can be shown to be for the benefit of a private interest, the same must prove equally advantageous to the whole country. As Americans we believe in fostering and developing the interests and industry of our own country in preference to the interests and industry of any other country. We would go even further, and as *protection* is a good and, in itself, honest word, we would protect American industry. But what is American industry ? It is not the raising of cotton in Mississippi, and the spinning it into yarn or cloth in Massachusetts ; it is not the digging of gold in California, the raising of grain in Iowa, the forging of iron at Pittsburg, the packing of pork in Cincinnati, the manufacture of hats at Newark, or the building of ships in New York. It is not one, but all of these that constitute American industry ; and when we say that we are in favor of protecting American industry, we mean that we are in favor of protecting and favoring all branches as fairly and equitably as possible, and not of protecting one interest with

one hand and, at the same time, striking down and destroying some equally meritorious interest with the other. And then, again, we would recognize the further fact, that taxation, or the taking away of one's property for other than personal purposes, is an act of deprivation, in the abstract an evil; and although the exercise of taxation, like the taking of medicine, is often necessary and results in great good, yet we would not, on that account, advocate either the payment of taxes or the dosing with medicine on general principles, when either could be dispensed with.

But there are people who think differently, who regard taxation as something good in itself, and who, although always talking of protection to American industry, do not mean thereby industry in general, but always some special industry.

In support of these views it is proposed to offer a few illustrations, as far more convincing than any other form of argument.

Liebig, the world-renowned chemist, remarks in one of his works, that when we reflect upon the important relation which sulphuric acid sustains to the great industries,—the bleaching, dyeing, and printing of cottons, the manufacture of glass, of soap, of paper, of phosphorus and matches, of refined oils and fertilizers, and many other articles,—it is no exaggeration to say that the commercial prosperity of a country may be very accurately measured and estimated by the amount of this article consumed, and also by its comparative price or cost. Measured by this standard, the situation of the United States is far from flattering, for the price of sulphuric acid is to-day more than double what it is in the commercial countries of Europe, and its *per capita* consumption much less than it is in either Great Britain, Belgium, or Germany.

Shortly after the war, when it became a matter of great importance to resuscitate the industry of the South and restore our supremacy in the raising of cotton, there were discovered on the coast of South Carolina immense deposits of fossil bones, which, when treated with sulphuric acid, became converted into soluble phosphate of lime, the fertilizer above all others best adapted to the necessities of the cotton-planter. It would, of course, seem natural that these deposits, extremely bulky in

their character, should be treated at or near the place where they are found. And so, doubtless, they have been ; but it was nevertheless stated in the Senate, in the debate on this subject (June 29, 1870), that it was more profitable "to send the crude deposit to England, have it manufactured there and returned to our shores for sale, than to make it ourselves." And when it was proposed in the last Congress to do something to reduce and cheapen the cost of sulphuric acid, by taking off from the *forty-seven millions of pounds* of sulphur annually imported into the United States the duty of *six* dollars per ton on the crude and ten dollars on sulphur freed from its abundant bulky impurities, and thus allow us to avail ourselves without limit of the great natural deposits of this article on the coast of Sicily, the place to which all other nations go, where it can be obtained almost for the mere cost of collecting, Mr. Senator Morrill of Vermont, a man who, for purity of character and general intelligence, has few equals in the national councils, objected, on the ground that there were some people in the State of Vermont who were engaged in the comparatively small business of making sulphur from iron pyrites, and that a reduction of the duty on imported sulphur would be prejudicial to their interests ; or, in other words, the interests of a little capital and a few men in Vermont were of far more importance, in the opinion of Senator Morrill, than the interest of the masses to cheapen cloth, soap, glass, paper, oil, and fertilizers, and through cheapening to increase consumption, and lead thereby to increased product and industrial development. And worse than this, Senator Sherman, chairman of the Committee on Finance, pleaded for the retention of the tax, on the ground that the government needed the revenue ; as if any government, except in dire necessity, could afford to raise revenue by taxing one of the fundamental elements of its industry, and least of all a government which at that time and ever since has exhibited a surplus of from five to eight millions per month over and above all its expenditures.

Take another illustration, as showing how what may be termed a great national branch of production has been restricted by the influence of what is falsely called "protection" to home industry. We allude to the manufacture of *fur and felt hats*.

This industry had established itself in this country before the Revolution, and had become so prosperous that hostile legislative measures were especially passed by the British Parliament in regard to it. Previous to 1860 America made better and cheaper hats than could be made in any other country. She exported a seventh part of all her product. She had invented a machine of the most ingenious character, which formed and shaped the hat almost automatically. Now what is the condition of this business? The exportation of hats has diminished. Nova Scotia, the West Indies, Australia, and the Cape of Good Hope, which formerly bought hats of us, now buy them elsewhere. The price at home has so far increased that our people wear proportionally fewer hats than they formerly did. The business has become unprosperous, and within the last two years the leading manufacturers and dealers have suffered immense losses or become bankrupt. The reason of all this is so obvious, that no one who will take pains to examine the question can possibly miss it. The body of the hat is composed of fur or wool, separate or mixed. Not having yet been reduced so far as to feel obliged to keep rabbits for their fur, we import coney fur from Germany. If we import it on the skin, we pay ten per cent; if cut from the skin, twenty per cent. The reason of the difference is to be found in the fact that there is but one very prominent firm in the United States that cuts hatters' fur. They have, it is reported, a machine that does the work with the smallest possible amount of manual labor,—a machine which has never been patented, and which is guarded with the utmost secrecy, for fear of imitation or use by others either in this country or in Europe; and the parties interested, having made an immense fortune out of the business, desire that their successors may do likewise. If wool is used instead of hair, experience has shown that one kind of wool, namely, that grown at the Cape of Good Hope, is most desirable, by reason of its peculiar felting qualities, and on this the manufacturer pays a duty of about one hundred per cent. The inside silk lining, a speciality of silk imported from France, pays sixty per cent; the silk ribbon on the outside sixty per cent more; and the inside leather, or "sweat-band," forty-five per cent; while the hat itself, if manufactured in Europe from fur and other

materials entirely free from all these taxes, is admitted into the United States at a duty of thirty-five per cent; and if from wool, at from twenty to fifty cents per pound, and thirty-five per cent *ad valorem*. Is it any wonder that, under these circumstances, the hat business does not flourish in the United States, and that our people pay more for hats than the people of any other country on the face of the globe?

Take another illustration. Ryland's "Iron Trade Circular" for March 4, 1871, published at Birmingham, England, has the following paragraph: —

"The edge-tool trade is well sustained, and we have less of the effects of American competition. That this competition is severe, however, is a fact that cannot be ignored, and it applies to many other branches than that of edge-tools. Every Canadian season affords unmistakable evidence that some additional article of English hardware is being supplanted by the produce of Northern States, and it is notorious how largely American wares are rivalling those of the mother country in other of our colonial possessions, as well as upon the Continent."

Does it occur to the reader to ask, in view of this testimony of the superiority of American edge-tools, under what circumstances foreign competition has been overcome and set at defiance? Does he know that the American manufacturer pays from 40 to 60 per cent more for his iron and steel than his Sheffield competitor; and in the manufacture of table and pocket cutlery, 10 per cent more for his bone for handles, and, until within a few months, from *ten* to *twenty* per cent more for his ivory? As an illustration, furthermore, of how our present revenue system tends to annoy and repress certain great branches of industry, instead of fostering and stimulating them, an incident of recent occurrence may be related. The continually increasing demand and consequently increasing price for ivory has long made the production of an artificial ivory a desideratum; and a patented compound invented in England and known as "Parkesine," or "Xylotile," has recently been imported in considerable quantities for the purpose of being used for knife-handles in place of ivory, in the manufacture of table cutlery. The secret of the composition of this ivory substitute is substantially as follows. Gun-cotton,

which is ordinary cotton converted by treatment with nitric acid into an explosive substance, is dissolved in naphtha, and converted into a clear but very adhesive liquid termed collodion. The collodion thus formed is mixed with zinc-white, ivory-dust, and various coloring materials, and through kneading, baking, and pressure there results a hard lustrous substance, resembling marble or bone, and capable of being sawed or worked as readily as either of the above-mentioned substances. When first imported it was passed as an unenumerated material, at 10 or 20 per cent duty; but after its use had become somewhat extensive, the duty was raised to 35 per cent, on the ground that it was a manufacture of cotton,—a decision about as sensible as it would be to impose the same tariff on bread-stuffs, crackers, or maccaroni as upon ice, for the reason that water is an essential constituent of all ordinary breadstuffs, and under some circumstances assumes the form of ice. And this decision, on appeal, was affirmed by the Treasury Department to be correct. “I have been a protectionist all my life,” said a leading manufacturer of cutlery to the writer, “but after such a decision as that by the Treasury Department, and with a continuance of the present enormous duties on all the steel we use, I find myself very fast departing from the ways of the fathers.”

Now it would not seem to require any great amount of knowledge to perceive that the way to extend the manufacture and sale of edge-tools in the United States, to concentrate, in fact, the major part of the business of the world in this industry in this country, would be to reduce the duties on steel and iron, and thereby put the American manufacturer, as regards the cost of his raw material, somewhat more on a par with his foreign competitor. But to such a proposition a comparatively few men engaged in making steel at Pittsburg and elsewhere, notwithstanding they have enjoyed for the last ten years a most enormous protection, vehemently shout *no*; and although there are one hundred men employed in the United States in manufacturing steel into knives, axes, tools, and machinery of every description, where there is one engaged in making steel, yet thus far the voices of the few have prevailed against the voices of the many, and the American people

continue to pay more for their steel and their tools and their machinery than any other nation on the face of the earth, civilized or uncivilized. And it does not require any extensive acquaintance with the principles of political and social economy to perceive that the nation which increases the cost of its tools and its machinery, increases thereby the cost of all that the tools and the machinery make, and thus imposes the very heaviest and most destructive burden upon its industry and progress that it is possible for the mind of man to devise and initiate.

But the instances of iniquitous tariff enactment, resulting in loss to the treasury and increased burdens upon the people, for which ignorance or diversity of views in respect to economic principles cannot be pleaded as excuse, are much more worthy of attention.

Take first, for example, the article of quinine, the standard remedy for fever and ague and general debility, a free supply of which is almost a necessary condition of existence in some portions of our country. Quinine is an extract from Peruvian bark, which grows only in South America, and is prepared mainly through the use of alcohol, which dissolves the alkaloid and leaves the other impurities. Before the war Peruvian bark was admitted free, and quinine paid a low duty of 15 per cent; but the war necessitated revenue, and a duty was imposed on bark of 20 per cent. To compensate the manufacturers for this advance, an internal-revenue tax, and the increased cost of alcohol, although it was afterwards shown that the alcohol used was not wasted to any great extent, but redistilled and used over and over again, the duty on quinine was increased to 45 per cent. But in 1867 the internal-revenue tax was taken off, and in 1869 the price of alcohol, through the reduction of the tax on distilled spirits, was reduced more than one half; but still the manufacturers held on to the protection of 45 per cent. By the act of July, 1870, the duty on bark of 20 per cent was removed and the import made free; but the Hon. William B. Kelley, that eminent friend of American industry, who managed this matter for the benefit of the two principal quinine manufacturers in the country, who live in Philadelphia, took good

care that the duty of 45 per cent on quinine should remain undisturbed.

What has been the result? Previous to the breaking out of the Franco-German war, quinine could have been imported from Europe free of duty for \$1.65 per ounce. The American price then ruled uniformly at \$2.25 per ounce, giving its American manufacturers an advantage of about 60 cents per ounce, or, at the rate of \$240,000 per annum, on an estimated annual consumption of at least 400,000 ounces over and above any foreign import. When, however, the Prussians, in their siege operations about Paris, burnt the quinine factory of Peletier, the largest in Europe, the American manufacturers, not content with their already ample profit and advantage, immediately advanced the price of quinine, and it is now quoted stiff at \$2.40 per ounce; which on a consumption of 500,000 ounces, the duty being now practically prohibitive, would give an additional annual advantage or profit of \$75,000. It is true that the price of bark is somewhat higher at present than it was a year ago, but there has been no increase of cost to warrant any such difference of price as exists between the European and American product.

Take another case. Some ten or fifteen years ago a New England mechanic invented a wonderfully ingenious machine for making wood-screws. As is generally the case, the inventor does not seem to have made much profit by the invention, but the company into whose hands it passed did, and for years they have, according to current report, paid dividends on watered stock of from 100 to 150 per cent per annum. But in order successfully to use this machine, which made screws cheaper and better than screws were ever made before, and which did away with the labor of hundreds and thousands of operatives formerly employed in the manufacture, it was necessary to protect American industry, and a duty of 11 cents a pound, or about 125 per cent on the cost of similar screws in Europe, was accordingly imposed and is yet maintained; and for the year 1870 the treasury received from the duties on imported screws, "commonly known as wood-screws" as the law expresses it, less than eighteen thousand dollars, while the American people paid more for their screws than was neces-

sary by at least a million of dollars.* And Mr. Sherman, chairman of the Senate Committee on Finance, senator from Ohio, says he can see no difference between a tariff for revenue and a tariff for protection.

Formerly the tops or uppers of ladies' and children's shoes were made exclusively of morocco or kid-skin; but it was discovered that certain peculiar fabrics of cloth, called "lasting" and "serge," made of long hairy wool of the kind that is grown in warm latitudes, were much better adapted for the manufacture of this variety of shoes than leather. The idea became immensely popular in the United States; and the shoes thus made, being lighter, cheaper, more elastic, and equally durable, were universally adopted. Being, moreover, particularly adapted to warm climates, a very large export trade in these shoes sprung up between the United States, South America, and the West Indies. But, in an evil day, a few men in Massachusetts conceived the idea that they could make a little money out of the business of manufacturing lasting and serge, and in order to help them Congress put on a duty sufficient to raise the price of all the lasting and serge used in the country to the extent of over a million of dollars, and thereby increased to the same extent the price of all the women's and children's shoes into which lasting and serge enter as constituents; or, in other words, in order to protect American industry, the government is made a *de facto* partner in one or two factories in Massachusetts, runs them at an expense to the people of from a million to a million and a half of dollars per annum, or about the amount required to defray the expenses of the whole foreign intercourse of the country, and taxes to an equivalent amount the shoes of the women and children of the country. Now, where is the protection to American industry in this proceeding? Is it not reversing the cardinal doctrine of every free democratic state, that legislation should always be for the greatest good of the greatest number, and making the good of the many subordinate to the interests of a few?

* The value returned to the internal-revenue office of the screws manufactured by one company in New England was \$2,210,000, out of a product for the entire country of \$2,260,000. As these screws are sold in the United States at more than double the price of similar screws in England, the advantage to the American manufacturer is easily calculated.

But there is an incident connected with this tax that deserves to be handed down to history. Bastiat, in one of his works, gives a petition from the manufacturers of candles, gas, oil, lamps, etc., requesting the legislature to direct the shutting up of all doors and windows, in order that the light of the sun may not penetrate to the interior of shops and houses to the prejudice of the several manufactures above indicated. No one, of course, in reading this petition would at first imagine that it is anything more than an extravagant burlesque ; or, if he recollects that in olden time, when it was first proposed to use mineral coal in England, the leather manufacturers petitioned Parliament against it, on the ground that if coal was used there would be fewer trees grown and felled, and, therefore, a smaller supply of bark for tanning, he nevertheless congratulates himself that things are looked at nowadays more sensibly. But it was reserved to our day and generation to have Bastiat's petition rewritten in earnest, and the views of the English tanners in respect to the use of coal again offered as a *bona fide* basis of legislation. When, in 1870, the special commissioner of the revenue, by reason of the views above expressed, recommended to Congress the removal of the duties imposed upon the importation of lasting and serge, the Morocco Manufacturers' Association addressed by their secretary the following letter to Hon. W. D. Kelley, which letter Mr. Kelley had the imprudence to publish :—

“ *To the Hon. Wm. D. KELLEY, M. C.*

“ *Dear Sir : I enclose you herewith a remonstrance signed by the morocco manufacturers of Philadelphia and Wilmington against the removal of the duty on serge goods, as recommended by Commissioner Wells. It is only necessary for me to call your attention to the fact that serges are now selling at \$1.20 per yard, that six and three quarters feet of morocco is considered equal to one yard of serge, and that the morocco, which would be used to compete with it, we cannot afford to sell for less than 26 cents per foot, so that, with the present duty, \$1.20 of serge will go as far as \$1.75 of morocco.*

“ The ‘ Morocco Manufacturers’ Exchange ’ have read your review of Commissioner Wells’s report with the greatest pleasure, and, in connection with the noble stand taken by you in favor of ‘ protection to American industry,’ have considered that it was but necessary to lay this matter before you to secure your interest and prevent the consum-

mation of this great outrage upon one of the largest branches of American industry.

“Hoping our confidence in your zeal and influence may not be overestimated, I am,

“Truly yours,

“EDW. S. DEEMER,

“Secretary of the *Morocco Manufacturers' Exchange*
of Philadelphia and Wilmington.

“PHILADELPHIA, January 20, 1870.”

Now we ask the special attention of our readers to the striking fact admitted in the above letter, namely, “*that \$1.20 of serge will go as far in making shoes as \$1.75 of morocco*,” and, although the shoe manufacturers and the women and children of the country prefer serge to morocco, as making a more graceful, healthy, light, and, withal, much cheaper shoe, Congress is called upon to intervene and make the country use what it does not want, at an expense of \$1.75 for what \$1.20 would do better; in other words, the sunlight is to be shut out, that lamps and candles may find a better market, and the people be made to pay for what is entirely useless.

We have space but for a single additional illustration. Previous to January 1, 1871, marble was admitted at a duty of from 50 to 70 per cent; and for certain purposes manufacturers consider Italian marble indispensable. The importation, which is large, is generally in the form of huge blocks, which are sawed and cut in this country to any shape or pattern that may be desired. But the manufacturers of the West found that it was a matter of great expense and difficulty to move large blocks of foreign marble inland, and so, until within the last few months, they have been in the habit of importing their marble in slabs, which could then be transported inland by way of the Mississippi and other Western rivers at small expense; and a very considerable business in the way of importing and reworking certain descriptions of foreign marble had sprung up in the West and Southwest, particularly at Louisville and St. Louis. But this independence Eastern manufacturers were not disposed to tolerate, and accordingly measures were taken during the year 1870 to put an end to it, by raising the duties, not on marble in huge, unwieldy blocks, such as could

be easily brought into New York and Philadelphia, but upon marble in smaller blocks and slabs. Meetings of those interested were accordingly held, and testimony can be adduced showing that statements were openly made that the "thing was going to be done," and "that any reasonable amount of money would be raised to help effect the increase of duties, if it should be found necessary." The duties were accordingly raised, and made for all practical purposes absolutely prohibitive, and by the following ingenious phraseology which none but an expert can interpret:—

"On all sawed, dressed, or polished marble, marble slabs, thirty per cent ad valorem, and in addition twenty-five cents per superficial square foot, not exceeding two inches in thickness; if more than two inches in thickness, ten cents per foot in addition to the above rate for each inch or fractional part thereof, in excess of two inches in thickness, Provided that, if exceeding six inches in thickness, such marble shall be subject to the duty now imposed upon marble blocks."

The result of the passage of this act was that seventy-five men were at once thrown out of employment at Louisville, and an equal number at St. Louis, the whole current of the Southwestern trade interrupted, and large investments of capital rendered useless.

And now, as a companion picture, we ask our readers' attention to a few extracts from the annual report of the Rutland Marble Company of Vermont, presented October 31, 1867; office Exchange Place, New York, Edward Wolfe, president; first premising that the capital stock of the company is one million of dollars,—the amount paid in being considerably less,—reported as not in excess of \$300,000. The report says:—

"The quality of our marble is unsurpassed; our statuary is acknowledged to be the finest in the world. The supply is inexhaustible, and a production of 300,000 cubic feet per annum would only deepen the openings less than ten feet yearly. Owing," however, "to the exorbitant rates of freight charged by the Rutland and Saratoga Railroad Company, on blocks to Troy, it is almost impossible to compete with Italian marble in the block trade for the lower grades. While the demand for sawed marble is as great as ever, that for blocks has fallen off materially."

The affairs of the company, before the increase of the tariff, were, however, reasonably prosperous, for the report concludes:—

“The financial condition of the company is most satisfactory,” and “shows a net result for the year of over 14 per cent in cash; besides an increase in the stock of marble on hand of over \$50,000, or 5 per cent on the capital. With the completion of the mill, all expenditures for permanent improvements will cease, and the stockholders will begin to reap the benefits by increased dividends.”

We forbear to comment further on the subject of marble! But similar statements could be made in respect to salt, grindstones, carpets, hair-pins, rolled copper, telegraph-wires, hair-cloth, sugar of lead, bichromate of potash, castor-oil, eyelets, and hundreds of other articles, in all of which legislation has been studiously arranged to benefit selfish and private interests, to the great detriment alike both of the treasury and the people.

But taxes thus indirectly levied upon the community, and obscured under the phraseology of so much per square yard or so much *ad valorem*, are no less taxes than when imposed directly and openly. And we hold that it is these very indirect taxes which have been heaped upon us during the last ten years, and are maintained under the specious pretence that they favor American industry, which to-day constitute, in connection with the currency, the great obstacles in the way of progress and development; which have enhanced prices, affected the natural distribution of wealth, disturbed labor, and rendered business unprofitable. And we hold, further, that if the covering of our financial legislation could be once stripped off as the anatomist takes off the outer integuments of an organic body, and the nerves, the chords, and the fibres of influence disclosed, and the whole seen to be stretched and worked for private advantage and personal emolument rather than for public good,—we hold that if the people could once see this, their vengeance on the politicians, the parties, and the men who do and countenance these things would be terrible.

Suppose the Hon. W. B. Kelley, instead of arranging matters to advance the interests of a few of his constituents by reducing the duty on bark but leaving the duty on quinine,

had manfully proposed a bill appropriating \$150,000 outright for this purpose from the treasury, is it to be supposed that any such bill would meet with favor? Have our readers any idea how such a bill would read? If not, we furnish a draft for their information: —

“Be it enacted by the Senate and House of Representatives in Congress assembled, That, in order to establish justice, provide for the general welfare, protect American industry, and promote the manufacture of quinine, the Secretary of the Treasury is hereby authorized to pay to A B and C D, of Philadelphia, out of any moneys not otherwise appropriated, the sum of \$120,000 annually, and in consideration therefor the said A B and C D covenant and agree that they will not charge the American people for quinine a price in excess of thirty cents per ounce over and above the price at which the same can be bought in all other commercial countries.”

In addition to the burden of taxation indirectly imposed,—a burden so great that no more satisfactory evidence of the wealth and resources of the country can be presented than the simple fact that it has sustained these taxes for ten years and yet lives and prospers,—let us consider for a moment the obstruction to development and the taxation consequent upon carrying out the two favorite financial schemes of the present administration; namely, the attempt to reduce the premium on gold without at the same time doing anything to decrease in other respects the cost of production, and the attempt to reduce the national debt by the maintenance of excessive taxation.

The President and the Secretary of the Treasury, in their last annual messages, congratulated the country that by their efforts the premium on gold had, within the past year, been reduced seventeen per cent. But seventeen per cent reduction of the premium on gold has meant seventeen per cent reduction in the currency price of the entire cotton crop of the country, and seventeen per cent in the value, at least, of all that part of the wheat, the pork, and petroleum and other products of the country available for exportation; and for the loss thus occasioned — aggregating not less than *one hundred millions* — there cannot have been any sufficient compensation, for, with the present volume of currency remaining unchanged, we have not been brought any nearer the resumption of specie payments,

and any reduction which may have taken place during the past year in the cost of production has been mainly due to an excess of labor and product consequent upon the limitation and restriction of the domestic markets, or to the exercise of greater skill and economy on the part of producers, and would have undoubtedly taken place all the same, even though the premium upon gold had been allowed to remain unchanged.

Again, the action of the Secretary of the Treasury in hurrying the payment of the principal of the national debt,—the thing for which the administration claims more of credit than for any other one act,—so far from actually relieving the country at the present time from debt, merely amounts to transferring the obligation, and rendering it far more burdensome. Thus, from what source has the \$ 200,000,000 by which the principal of the debt has been reduced during the last two years been obtained? Unquestionably from taxation. Now let us follow the incidence and the influence of *a dollar* of tariff taxation, imposed, not for the purpose of paying interest and defraying expenditures, but for the sole object of reducing the debt. As such the dollar constitutes as much an element in the original cost of an imported article as do the freights, the interest, and the commissions; and being paid in gold in the first instance becomes at once and in all subsequent transactions a dollar and ten cents, at least, in currency. On this the importer expects to make a profit of ten per cent, thus augmenting the incidence of the dollar tax in the first stage to \$ 1.21. A like profit on the part of the jobber further increases it to \$ 1.34, while the profit of the retailer, if reckoned at twenty per cent, brings up the incidence of the tax of the dollar in the first instance to about \$ 1.60 to the consumer, who ultimately and especially in this instance pays the tax; thus demonstrating that the payment of the \$ 200,000,000 which the administration, during the last two years, has made upon the national debt, has been effected at a cost to the people of not less than \$ 320,000,000, to say nothing of other taxes which the imposition of one tax under the tariff always indirectly creates and occasions. Now, if it can be demonstrated that the imposition of the dollar tax in the first instance is necessary, and the proper time and place to take it is at the present moment and through the tariff, we

have nothing to say. But if the tax is not needed, if the time and the place are not opportune, and if the development of the country and the consequent elasticity of the revenues constitute in themselves a sufficient provision for the debt in the future, then we say, that the taking from the people at this time \$160,000,000 per annum by taxation to pay \$100,000,000 of the debt is something which is not to be spoken of to our credit, but rather to our shame.

It would seem, therefore, that the questions involved in the defects of our financial policy and methods of taxation, as above indicated, are not questions which require that the advocates of reform should necessarily commit themselves either to the principles of free trade on the one hand, or of protection on the other; inasmuch as they concern simply the reform of abuses. And it is, moreover, the maintenance of these abuses which give to very many industries a claim for protection which otherwise would not be demanded. Governor Thomas of Maryland, in a speech before the Committee of Ways and Means a year ago, which was never published, set this matter in its true light. He is reported to have said: "I live in Alleghany County, Maryland, where our staple product is coal, and we have found by calculation that we are taxed every year to the extent of nearly two millions of dollars through the increased price which we are obliged to pay for all that we consume in working this coal and transporting it to market,—for our iron, our lumber, our woollens, our oil, and our machinery; and we only ask, as a matter of justice, that a sufficient duty be imposed upon coal to compensate us for our taxes." All of which, rendered into simple English, amounts to this: You have allowed A, B, and C to plunder us annually to the extent of two millions; now allow us in return to plunder somebody else in the way of compensation.

There is still another way of demonstrating how abuse in this matter of fiscal legislation feeds upon and nourishes abuse, or how the injudicious and unwarranted imposition of taxes under the tariff of itself creates a necessity for compensating or protective duties. Take a business, for example, like that of manufacturing woollens, where the capital may be supposed to be turned two or three times per annum, or where the

annual value of the product is two or three times greater than the capital employed. Now if the American product is enhanced over and above the cost of a similar article produced in England to the extent of two or three per cent, — as experts, indeed, allege, — by reason of the tariff imposed on the importation of the few manufacturing elements of teazles, dyestuffs, and olive oil, is it not clear that an advantage is thereby guaranteed to the foreigner over the American of from six to nine per cent per annum on his manufacturing capital ; or, in other words, with the cloth or yarn selling at the same price in a given market, the present fiscal legislation of the United States insures to the foreigner a dividend of from six to nine per cent per annum on his capital employed in woollen manufacturing, and imposes a corresponding disadvantage on his American competitor ; thus compelling the latter to stand on the defensive in his own markets, and depriving him of the possibility of selling a single yard of cloth in competition in any foreign market. And under such circumstances, is it not also clear, that to deny the American woollen manufacturer compensating protection would be not only gross injustice, but also equivalent to saying that the woollen business shall not be carried on in the United States ? The present wrong, therefore, consists, *not* in giving to the American woollen manufacturer a protective duty on the import of foreign woollens in compensation for the disadvantages to which he has been subjected by impolitic fiscal legislation, but in making such protection necessary by taxing, in the first instance, the elements of a great leading industry, and thereby necessarily and uselessly increasing the cost of the domestic manufacture, and ultimately throwing a heavy burden of taxation, through increased cost, upon the consumers, who are in this instance mainly the masses.

In short, the work of the hour is to reform these abuses. Until this has been done, the country is in no condition to discuss whether it will adopt free trade or protection as a policy ; and we would even go further and assert, that when these abuses under the tariff have been done away with, it will be found that fully one half of the necessity which may now exist for protection will be obviated, and that when the currency is

reformed the other half has departed also, and that the nation, of its own accord, will quit the position which it now occupies in respect to its industry of standing on the defensive, and, going back to the position it occupied in 1859-60, will boldly assume the offensive and bid defiance to every foreign competitor in every variety of production for which Providence has afforded us equal natural advantages.

It is the desire and the endeavor to accomplish such ends that to-day constitute the essence of revenue reform; and it is in the faith that such ends can be accomplished, and a greater measure of prosperity and a greater abundance than have ever yet been obtained can be secured to the country, that the advocates of revenue reform present their cause to the people and demand of them encouragement and support. And in view of the evidence presented, and of the ends and objects proposed, how contemptible becomes the sneer "that revenue reform seems to be something which is to supply every man's wants without any cost or effort on his part."

On the other hand, the present fiscal policy of the government, which has been foisted upon the country and is defended by its advocates on the grounds that it fosters and promotes the extension and diversity of American industry, so far from effecting any such result, in reality has powerfully contributed to the arrest of industrial growth and development, and to the diversion of labor from those employments in which skill and intelligence, rather than brute force, are the essential and requisite elements. Startling as is this assertion, the evidence which can be adduced in its support is of such a character as practically to reach demonstration. Thus, as has been already stated, the returned currency value of our exports for the calendar year 1870 amounted in the aggregate to \$506,000,000; but of this large sum \$442,000,000 stands to the credit of cotton, breadstuffs, tobacco, provisions, petroleum, hops, naval stores, oil-cake, and bullion,—the latter being taken at its specie value. If we add to this amount \$13,285,000 for the export value of wood and manufactures of wood (the latter mainly in the form of sawed and unelaborated material), \$10,400,000 for firearms, cannon, and munitions of war (a wholly exceptional export of the year), \$2,481,000 for tallow,

\$1,416,000 for coal, \$1,783,000 for furs and fur-skins, and \$920,000 for living animals, we shall have left the comparatively small sum of \$34,000,000 to represent the exported surplus of all the mechanical and skilled industries of the country,—the manufacture of metals, of textiles, of glass and earthenware, books, paper, drugs, chemicals, fancy articles and Yankee notions, leather, hats, india-rubber, ships, agricultural implements and machinery of all kinds, marble and stone, soap, candles, salt, seeds, sugar and confectionery, distilled spirits, wearing apparel, carriages, railroad equipments, and the like,—a sum absolutely less than is at present paid out by the three leading railway corporations of the country for their annual equipment and running expenses. It would seem to be almost in the nature of a self-evident proposition, that if we dam up or obstruct by legislation, by war, or any other cause the export outlet for the surplus product of the so-called manufacturing industries of the country,—as we have been most assiduously and successfully engaged in doing for the last ten years,—that we thereby necessarily limit the growth and extension of those same industries to the increased consumption consequent upon the increase of the population of the country,—now at the rate of about one million per annum. But in every progressive civilized country, especially in a country like the United States, where brain and fingers are unusually active, the powers of production, through the continued invention and application of labor-saving machinery and processes, always increase in a far greater ratio than population; the machine or process, for example, which saves the work of twenty men, and thereby adds that number of laborers to the force engaged in other branches of production, requiring very probably for its support not more of industrial product than would have been adequate to the necessities of a single one of the men whose occupation it has supplanted. The consequence of this is that production continually gains upon consumption; and if the surplus thus occasioned is not allowed to flow out of the country through the channels of export, it inevitably rolls back upon the domestic markets, depressing prices to a point where trade and commerce can resume their natural and normal channels; or paralyzes industry until consumption again becomes equal to or in excess of production; both of

which results the manufacturer instinctively resists by what seem to him the only practical methods available, namely, reduction of wages or suspending production. And herein is to be found the explanation of the strikes, combinations, and dissensions which have prevailed during the last few years among the laboring classes of the country, and also for the continued depressions and fluctuations in business during the same period, — a condition of things which will most assuredly last and repeat itself until we have a complete change in our fiscal policy, and a selection of men for administration whose claim to office is based on some other qualification than that of having been an adroit politician or a successful fighter.

In view of these conclusions, how significant the statement that the value of the manufactured cotton exported during the last year from the United States was not equal to the value of the oil-cake exported, or the residuary product of the manufacture of linseed oil; and how full of meaning the following extract from the recent official report of Mr. J. N. Larned on the state of trade between the United States and the British Possessions of North America. Concluding a review of our commercial relations with Canada, he says: —

“ The range of the Canadian market for American productions appears to be lamentably limited and almost confined to the rawest products of agriculture, with hardly an appreciable opening for the benefit of our skilled labor in any department; and this, too, in the case of the nearest neighbors that we have upon the globe.”

That such results cannot in any degree be referred to any necessity of taxation entailed upon us by the war, is fully proved by the fact that the interest on the entire debt for the fiscal year 1869 — 70 was far more than provided for by the revenue derived from the taxes imposed upon distilled spirits, fermented liquors, tobacco, stamps, banks, and bankers; not one of which taxes necessarily fall upon labor, or in any degree increases the cost of the so-called “ manufacturing production”; and if a similar financial result has not been attained to for the last fiscal year, it is to be accounted for mainly by the fact, that the Executive of the United States has been pleased to appoint, as commissioner and superintendent of the internal revenue, a man whose chief and almost sole qualification was that he had been a good cavalry officer.

The spirit of political conservatism, to which the retention of unreasonable laws is commonly due, has many recommendations, especially in a popular form of government. It is natural and right enough that an administration charged with the responsibilities of office should lean towards an established policy, and should see good even in ancient abuses. No one can blame a public officer for feeling some jealousy at outside interference with his duties, or for ignoring small knots of men without political strength, who attempt to force upon a government the first crude ideas of political change which happen to catch a momentary breath of popular applause. But even in America, where, if anywhere, conservatism is strongly needed, it may be carried too far for the public good. An administration which avows its intention not to investigate abuses, not to relieve injustice or regard remonstrance, has already become too conservative for its own safety. Yet this is the nature of administrations, and we do not wish to imply that there is anything extraordinary in the attitude assumed by the present Executive. Undoubtedly there have been Presidents as little inclined to reform as President Grant, and it is probable that there may have been finance ministers less competent than the present Secretary of the Treasury. But if it is the nature of administrations to resist at first even the most necessary reforms, it is no less the nature of intelligent citizens to insist upon them, and to indicate in the clearest possible language that, where common sense and political strength are combined, there even the slowest administration must act. We have attempted to show that common sense is on the side of the revenue reformers; and although the question of political strength does not come within the scope of this essay, the public can hardly remain much longer in doubt where it lies. In the face of this situation it remains for the government to decide whether it will continue its devotion to established abuses, and renew its sneers at reform, or whether it will vigorously apply such intelligence as it has at its command, and recognize the fact that revenue reform means its own salvation by a timely reversal of its present financial policy.

DAVID A. WELLS.

ART. V.—1. *Palestine Exploration Fund.* Vol. I. London: Published at the Society's Office, 9 Pall Mall East.

2. *The Recovery of Jerusalem: A Narrative of Exploration and Discovery in the City and the Holy Land.* By Capt. WILSON, R. E., Capt. WARREN, R. E., etc. *With an Introduction by ARTHUR PENRHYN STANLEY, D. D., Dean of Westminster.* Edited by WALTER MORRISON, M. P., Honorary Treasurer to the Palestine Exploration Fund. London: Richard Bentley. New York: D. Appleton & Co.

3. *Ordnance Survey of the Peninsula of Sinai:* made with the sanction of the Right Honorable Sir JOHN PAKINGTON, Bart., Secretary of State for War. By Capts. C. W. WILSON and H. P. PALMER, R. E., under the Direction of Col. Sir HENRY JAMES, R. E., F. R. S., Director-General of the Ordnance Survey. Published by authority of the Lords Commissioners of her Majesty's Treasury.

AN additional word or two from the Evangelists or from Josephus would have determined the topography of Jerusalem with such accuracy that no serious controversy could ever have arisen concerning the sacred places. If Luke, for instance, had not rested with saying, "when they were come to the place which is called Calvary," but had added, 'which was on such a side of the city, upon such a hill, at such a distance from such a gate,' the site of the crucifixion and of the sepulchre,—which, according to John, was "in a garden, in the place where Jesus was crucified,"—could hardly have come into dispute. But the Evangelists wrote for contemporaries, to whom the localities to which they referred were as familiar as are the Common, the State House, and Bunker Hill to Bostonians; and they were too intent upon the moral bearings of the great transactions they were recording to think of the perplexities of future archæologists. Though the description of the site of Jerusalem by Josephus was written for strangers, and intended to convey a minutely accurate picture of its principal features, there is a provoking want of definiteness upon some important points in the topography of the city. This description has been the armory from which the combatants upon this

“battle-field” of archæology, as Isaac Taylor has styled it, have drawn their principal weapons for every side of the controversy; and no intelligent discussion of the sacred localities of Jerusalem can be had, which does not dispose satisfactorily of the main points in the topography of the Jewish historian. According to Josephus,—

“The city was built upon two hills, one part facing the other (*ἀντιπρόσωπος*, *face to face*), separated by an intervening valley, at which one upon another (i. e. crowded together) the houses ended. Of these hills, that on which the upper city stood was much the higher and straighter in its length. Accordingly, on account of its strength, it was called the fortress of King David, the father of Solomon, by whom the Temple was originally built, but by us it is called the upper market-place. The other hill, called Akra, which sustains the lower city, was curved on each side (*ἀμφίκυρτος*, *gibbous*). Over against this was a third hill, naturally lower than Akra, and formerly separated from it by another broad ravine. Afterwards, however, when the Asmoneans were in power, desiring to connect the city with the Temple, they filled in this ravine, and, cutting down the summit of Akra, they reduced its elevation, so that the Temple might appear above it. The valley called Tyropœon, which we have said separated the hill of the upper city from that of the lower, extends as far as Siloam, for so we call a fountain whose waters are both sweet and abundant. From without (i. e. exterior to the city), the two hills of the city were encompassed by deep ravines, and because of the precipices on both sides there was nowhere any approach.” *

Detailed as this description is, it should be remarked that the names *Zion* and *Moriah* do not occur in it; and if it be assumed that *Zion* was the city of David, the site of the royal fortress, and *Moriah* the site of the Temple, there is nothing here to determine whether Akra lay north of *Zion* and west of *Moriah*, or east of *Zion* and north of *Moriah*; and either disposition of these three hills would meet the conditions of Josephus. The data here furnished are: (1.) A fortified hill, upon which stood the tower and palace of David; (2.) A lower hill, called Akra, convex in shape, close up against the first, and separated from it by a ravine known as the Tyropœon, which terminated near the fountain of Siloam; (3.) A third hill opposite to Akra, and eventually joined to it by arti-

* Joseph. Bell. Jud. V. 4, 1.

ficial levelling, upon which the Temple stood ; (4.) Deep ravines encompassing the two hills, i. e. the hills of David and Akra, which were respectively the upper and the lower city. In another passage Josephus gives a clew to the position of these two hills relative to the Temple and to the points of the compass. Describing the gates on the different sides of the Temple enclosure, he says : —

“ In the *western* parts of the enclosure stood four gates : one leading over to the royal palace, the valley between being intercepted to form a passage ; two leading to the suburb ; and the remaining one into the other city, being distinguished by many steps down into the valley, and from this up again upon the ascent : for the city lay over against the Temple in the manner of a theatre, being encompassed by a deep valley on all its southern quarter.” *

This statement adds to the foregoing data the following items : (5.) The palace, and hence the “ upper city ” of David which was grouped about it, lay across a valley west of the Temple ; (6.) The lower city, or Akra, was also *west* of the Temple, a double flight of steps forming the connection between them through the valley ; (7.) Hence the *whole* city lay upon the western side opposite to the Temple, like an amphitheatre, of which the westward wall of the Temple enclosure was the chord. This would seem to dispose of the theory of Mr. Fergusson, that “ Akra was situated on the northern side of the Temple on the same hill, and probably on the same spot, originally occupied by David as the stronghold of Zion ; and consequently that the great northern depression running towards the Damascus gate is the Tyropœon valley.” † On the contrary, Josephus leaves little room to doubt that the city of David, the primitive Jerusalem, afterwards known as the upper city, answered to the modern Zion ; that north of this lay Akra, separated by a valley which began near the present Jaffa gate, and, bending southward, ended at Siloam ; and that the Temple was opposite to these two hills, somewhere upon the area of the Haram. But here arises a difficulty from the language of Josephus concerning the Asmoneans. They filled in the broad ravine between Akra and the Temple ; yet there remains to this

* Ant. XV. 11, 5.

† Smith’s Dictionary of the Bible, art. *Jerusalem*.

day a marked valley running from near the Damascus gate down to Siloam. It is not easy, however, to reconcile this filling up of the valley with what Josephus elsewhere says of the "descent by many steps" into this same valley between Akra and the Temple. Perhaps he meant that the valley had been relatively raised ; or that the northeastern ridge of Akra had been levelled, and the valley filled in at that point. This view would harmonize with the fact of a depression from the Damascus gate southward between Akra and the Temple. It is particularly to be noted that Josephus does not call *this* valley the Tyropœon, but rather implies the contrary. First, he describes the city as built upon two hills, separated by an intervening valley which he does not here name ; next, he describes a third hill separated from Akra by *another* broad ravine ; then he adds that the Asmoneans filled in *this* ravine ; and now recurring to the valley which separates the hill of the upper city from that of the lower, he names this the Tyropœon, in direct contrast with the valley which separated Akra from the Temple. If then the Damascus valley represents the Tyropœon, Akra must be transferred to the eastern side, on the same ridge with the Temple hill, where Mr. Fergusson places it ; but what, then, would become of the statement of Josephus, that a gate in the *western* wall of the Temple conducted to Akra ?

With the determination of the physical features of ancient Jerusalem the location of the sacred places is closely connected. For many centuries tradition had accepted the Church of the Holy Sepulchre as identifying the two sites of the crucifixion and the burial of Christ ; but the publication, in 1841, of Dr. Robinson's "Biblical Researches" brought to bear against this tradition a weight of topographical and historical evidence which seriously impaired its force, and is likely in the end to overthrow it altogether. Jesus was crucified without the gate of the city. The second wall,—for the third, having been built some years after the crucifixion, cannot enter into the argument,—the second wall, as described by Josephus, began at the gate Gennath, near the tower of Hippicus, and ran in a circle or curve over the hill on which the lower city was built. If the Tyropœon began at the Jaffa gate, and Akra was the hill

directly north, then a wall circling from Hippicus, for strategic reasons, for the accommodation of population, and to include the pool of Hezekiah, must have run outside the Church of the Sepulchre ; and that site, being within the wall, could not have been the scene of the crucifixion. Mr. Fergusson, in accordance with his peculiar theory of the hills, transfers the sacred places to the eastern side of the Tyropœon, and regards “ the building now known to Christians as the Mosque of Omar, but by Moslems called the Dome of the Rock, as the identical church which Constantine erected over the rock which contained the tomb of Christ.” Such was the condition of these problems when, in 1864–65, Captain Wilson, R. E., entered upon an Ordnance survey of Jerusalem, to be followed by the laborious excavations of Captain Warren, R. E., within the city from 1867 to 1870. The state of the question is clearly and accurately presented in the Introduction to Vol. I. of the “ Palestine Explanation Fund ” :—

“ The tongue of land on which Jerusalem is built is split in the midst into two ridges, by a ravine running from north to south from the Damascus gate to a point in the Kedron valley somewhat north of its junction with the valley of Hinnom. This depression has generally been identified in its whole course — and indisputably as to the lower portion which runs under the west wall of the Haraa, and thence to the Kedron — with the Tyropœon valley of Josephus. Of the two ridges on which the city stands, the western is the most elevated and most important. Most authorities are agreed in placing on some portion of this ridge the original city of Jebus, captured by King David, and the upper city of Josephus. All again are agreed in fixing Ophel on the end of the tongue of land on which stands the Haram es-Shereef, and in making the site of the temples of Solomon, Zerubbabel, and Herod, and of the castle of Antonia, either coincide with or occupy some portion of the Haram itself.

“ But here all agreement may be said to stop. There are differences of opinion whether we should fix the Mount Zion of the Bible and the Mount Zion of the writers of Christian times on the same or on opposite hills, whether the name is to be identified with the eastern or the western ridge. The exact position of the Temple is matter of controversy ; the site of the Akra of Josephus, and the Akra of the Book of Maccabees, of Bezetha the fourth quarter and last added suburb of the city ; the position of the towers Hippicus, Phasaelus, and

Mariamne, and of the tower Psephinus, which, if determined, would go far to settle the disputed question of the course of the second and third walls of Josephus; the exact extent of the city in the time of our Saviour;—are matters of keen dispute, which can only be settled by patient and systematic burrowing into the *débris* produced by many successive demolitions of the city, at those points where the absence of inhabited houses renders it possible to excavate at all. And upon the decision eventually arrived at on these points depends the settlement of what is the most difficult, as it must be by far the most interesting problem to us all, namely, whether the present Church of the Holy Sepulchre does or does not cover the true sepulchre of our Saviour; if not, whether the true site can yet be recovered, and if so, in what quarter we should look for it.

“ Suffice it to say, that Mr. Williams and his followers regard the present site of the Holy Sepulchre as genuine; Mr. Fergusson considers the octagonal-domed building in the middle of the Haram, known as the Kubbet es-Saera, to be the church of the Anastasis, built by Constantine, over what he believed to be the site of the Sepulchre; while Dr. Robinson, agreeing with Mr. Fergusson in discrediting the present traditional site, is not prepared to point out a substitute. Again, the Temple of Herod is identified by Monsieur de Vogüé with the whole of the present Haram enclosure, the castle of Antonia being placed to the north, where the modern Turkish barracks stand; Mr. Williams places the Temple around the Kubbet es-Saera, which he considers to be the site of the high altar, regarding the southern portion of the enclosure as of later date. Mr. Fergusson places the Temple on a square of six hundred feet, of which the southern and western sides respectively would be formed by a length of wall extending for six hundred feet east and north of the present southwest angle of the Haram, and Antonia immediately to the north of it. Amidst all these conflicting theories on these and other points, systematic inquiry into facts by competent and independent parties is urgently needed, and such are the agents and such the work of the Palestine Exploration Fund.”

The “ Palestine Exploration Fund ” grew out of an attempt to relieve the sanitary condition of Jerusalem by improving the water supply of the city. As a preliminary to this an accurate plan of the city was required, and the expense of an ordnance survey was provided by the generosity of Miss Burdett Coutts. Captain Wilson did his work thoroughly, and we are indebted to him for the most complete and accurate maps and plans of Jerusalem yet published. Captain Wilson was so fortunate as

to confirm Dr. Robinson's discovery of the arch of the ancient bridge from the Temple to the Xystus on Zion; and Captain Warren describes in detail and with graphic illustrations the recovery of the pier and fallen voussoirs of this arch upon an ancient pavement lying under forty feet of *débris*; and also the discovery of another more ancient arch at a farther depth of more than twenty feet. Near the southwest corner of the area of the mosque may be seen several large stones jutting out from the western wall, as if forced from their original position by some violent convulsion. Upon careful examination, Dr. Robinson satisfied himself that these stones are really a skew-back; "their external surface is hewn to a regular curve; and being fitted one upon another, they form the commencement or foot of an immense arch, which once sprung out from this western wall in a direction towards Mount Zion, across the valley of the Tyropœon."* By sinking a series of shafts, Captain Warren came upon a pier 51 feet 6 inches long and 12 feet 2 inches thick, exactly opposite the remains of this arch of Robinson, giving a span of a trifle over 41 feet 6 inches; and on a pavement which stretches from the base of the pier to the sanctuary wall were found the fallen voussoirs and *débris* of the arch. This pavement was found to be laid over an immense mass of rubbish; and on digging through this to a depth of 23 feet, Captain Warren found two fallen voussoirs of an arch jammed in over a great rock-cut canal. The bottom of this canal is 74 feet below the springing of Robinson's arch, and 107 feet below the level of the old roadway. Captain Warren's theory is that, in the course of the many sieges of Jerusalem, the bridge which anciently crossed the Tyropœon at this point fell, breaking in part of the arch of the aqueduct beneath it,—the two voussoirs found in the bottom of the canal being remains of this original bridge; that the valley was choked up with *débris* to the depth of more than 20 feet; when the Temple was reconstructed by Herod, a pavement was laid on this mass of rubbish, and the pier and arch of Robinson's arch and viaduct were built; in time this arch also fell, and its remains are now found upon the pavement; *débris* again filled up the valley, and the pier of the arch, sticking out,

was removed for building purposes, all except the three lower courses, which are still standing. Thus the critical sagacity of our illustrious countryman, Dr. Robinson, is confirmed by most substantial proofs ; and the arch which he was the first to connect with the viaduct of Josephus confirms his view of the course of the western wall of the Temple, and the relation of the Temple itself to Zion.

The accumulation of *débris* within the city, in the valley of the Tyropœon, enormous as this is proved to be, is far exceeded by that in the Kedron, without the walls. At the northeast angle of the Sanctuary *débris* was pierced by shafts to the depth of 125 feet below the present surface ; and the valley so near its head, as found by these excavations, is over 165 feet below the Sakhra,* or Dome of the Rock ; lower down, its depth is 280 feet, — the true bed of the Kedron being $38\frac{1}{2}$ feet below the present false bed. This shows that Josephus hardly exaggerated the height of the Temple in saying that, “if from the roof of the middle portico one attempted to look down into the gulf below, his eyes became dark and dizzy before they could penetrate the immense depth.”†

In driving a gallery into the sanctuary wall upon its eastern side, at a depth of 53 feet below the outer surface, Captain Warren came upon several ancient courses of stone which apparently had never been disturbed since the original foundation of the Temple walls was laid, and which bore traces of supposed quarry-marks in red paint, which may have been laid on by Hiram’s workmen. This, however, is matter of conjecture.

Both Captain Wilson, and Captain Warren after him, explored the series of rock-hewn cisterns with which the rock of the Sanctuary is honeycombed, and in which the water brought by an aqueduct from Solomon’s Pools, near Bethlehem, was stored. “These cisterns appear to have been connected by a system of channels cut out of the rock ; so that when one was full the surplus water ran into the next, and so on till the final overflow was carried off by a channel into the Kedron. One of the cisterns, that known as the Great Sea, would contain

* Recovery of Jerusalem, p. 187 Eng. ed., p. 146 Am. ed.

† Joseph. Antiq. XV. 11, 5.

two million gallons; and the total number of gallons which could be stored probably exceeded ten millions.”* Dr. Robinson, by personal exploration, established the existence of a subterranean canal from the Virgin’s fountain to Siloam, and the intermittent flow of water at the fountain of the Virgin; and he conjectured that there was also a connection between the fountain of the Virgin and an artificial fountain under the Haram (of which he knew only by report); but neither Captain Wilson nor Captain Warren, in their search after the ancient channels of water supply, came upon any such connection. The ignorance and jealousy of the Moslem authorities frustrated the benevolent plan of Miss Coutts for reopening the high aqueduct of Gihon, and thus restoring the fulness of the ancient supply. A careful examination of the Triple Gate seems to disprove its pretensions to being a portion of the exterior wall of the Temple.

The recovery of Robinson’s arch; the discovery of Wilson’s arch; “some approximation to the date of the walls of the Temple by the discovery of the supposed Phœnician characters marked in red paint on their surface”; some more exact determinations in the course of the Sanctuary walls as bearing upon the site and extent of the Temple area; the measurement, by a series of shafts, of the depth of *débris*, revealing the ancient levels of the Tyropœon and the Kedron, and the amazing height of the Temple above the bed of the latter; and the discovery of subterranean remains attesting the architectural grandeur of the ancient city;—these make up the sum of the results of the explorations at Jerusalem. Contrasted with the presuming title of the volume, “*The Recovery of Jerusalem*,” these results, in their actual worth to the archæology and topography of the city, will create in many readers a feeling of disappointment. Nothing positive is added to our knowledge of the course of the ancient walls of the city. The only contribution toward the site of the Holy Sepulchre is in this brief and cautious paragraph by Captain Wilson:—

“The solution of this difficult question depends on the course of the second wall which surrounded the city; if it ran to the east of the church, there is no reason why the present tradition should not be cor-

* *Recovery of Jerusalem*, p. 17.

rect (?) ; if it ran to the west, the tradition must be wrong.* Up to the present time no one has seen any portion of this wall ; the point from which it started, and that at which it ended, are alike unknown. It was, however, ascertained, during the progress of the survey, that the old arch near the south end of the bazaars, called the Gate Gennath, was a comparatively recent building, and that the ruins near the Church of the Holy Sepulchre, which had been pointed out as fragments of the second wall, were really portions of a church.”†

So far as this goes it tends rather to favor Dr. Robinson’s view.

Captain Warren advances a theory concerning Zion which greatly increases the confusion in which the topography of the ancient city is involved. He regards the Zion of David as identical with the Akra of Josephus ; and places the “upper city” of Josephus on “the hill lying south of the road leading from the Jaffa gate to the Bab es-Silsile, and including the Armenian and Jewish quarters, and probably also part of the hill to the south, outside the present walls.”‡ Hence Akra or Zion, the “lower city,” lay to the north, about et-Takiyeh, or the palace of Helena ; and the Tyropœon valley began near the present Jaffa gate, and divided, not Zion from Akra, but the “upper city” from Akra, which was also the Zion of David and of the historical books. Captain Warren has sketched this theory in a plan of “Jerusalem at the time of King Herod” ;§ but though we have studied this plan with care, and have supplemented it with sketches of our own, we have not been able to harmonize his theory of Zion with the statements of Josephus. This same plan traces the area of Herod’s Temple as occupying the whole southern portion of the present Sanctuary, or a square of nine hundred feet.

“I only put this forward, however,” writes Captain Warren, “as an idea, for I am very unwilling to attempt to elaborate any plan of this position of the Temple, until I see how the general idea is received by

* This branch of the alternative is obviously true ; but Dr. Robinson has given reasons which invalidate the tradition itself, apart from the question of the course of the wall.

† Page 10.

‡ See Captain Warren’s paper on “The Comparative Holiness of Mounts Zion and Moriah,” in Vol. I. of the Palestine Exploration Fund, p. 76.

§ Eng. ed. p. 303 ; Am. ed. p. 236.

the learned public ; for perhaps now that all the details of our work are accessible in one volume, some other views and arguments may be started which will capsize the theory I have at last formed ; and I must acknowledge that I only put forward a theory which appears to me to be less open to objection than any other, and I should be very willing to see a more perfect solution of the question." *

The same tone of modesty characterizes Captain Warren's summing up of the bearings of his explorations upon the topography of the Holy City :—

" I have given the few opinions I possess for the information of those who have not yet been convinced either way ; and I may conscientiously say that I have carried on the work entirely without any strong bias towards any particular theory, for my opinions have changed whenever our researches, throwing new light upon the several questions, have shown that I was in error, and I have not hesitated to say so in my letters." †

Though the results of the explorations at Jerusalem are disappointing to those who had looked for a solution of the main questions in debate, they are by no means discouraging to the patrons of the Fund. They show that the theory upon which the Fund has conducted its operations is sound, to wit, that the Jerusalem of the time of Christ lies buried under the rubbish of centuries, the removal of which — or even the penetration of it by shafts at points judiciously selected — would uncover enough of ancient walls, arches, bridges, steps, pavements, aqueducts, to restore the plan of the city as described by Josephus, and to determine the location of the sacred places. For such a "recovery of Jerusalem," however, there will be required not only money, patience, and skill, but the support of a strong and liberal government. Much praise is due to Captain Warren for the perseverance with which he overcame the material, religious, and political obstacles to his undertaking.

" These excavations were carried on at the constant risk of life and limb to the bold explorers. The whole series of their progress was a succession of lucky escapes. Huge stones were day after day ready to fall, and sometimes did fall, on their heads. One of the explorers was injured so severely that he could barely crawl out into the open air ;

* Eng. ed. p. 303 ; Am. ed. p. 236.

† Eng. ed. p. 326 ; Am. ed. p. 256.

another extricated himself with difficulty, torn and bleeding; while another was actually buried under the ruins. Sometimes they were almost suffocated by the stifling heat; at other times they were plunged for hours up to their necks in the freezing waters of some subterranean torrent; sometimes blocked up by a falling mass, without light or escape. And these labors had to be carried on, not with the assistance of those on the spot, but in spite of the absurd obstacles thrown in the way of work by that singular union of craft, ignorance, and stupidity which can only be found in Orientals."*

Captain Warren's narrative resembles the *débris* with which he became so familiar in Jerusalem; and after the utmost pains in boring through it, we have sometimes failed to get at his meaning. The reports are most carelessly edited. "Considerable reductions," we are informed, "were made in his original paper," care being taken "to preserve all that relates to the actual work, while his conclusions are given in full." But there is no well-connected digest of his journals and reports, and one must often hunt through many pages to find some supplementary or explanatory fact. The book has the appearance of being hastily put together for the holiday season, as an advertisement of the Fund; but the English edition is admirably printed, and the numerous illustrations are executed with a mechanical skill which sometimes gives a startling reality to the narrative. The American edition falls far below the English in mechanical execution, but is afforded at a much cheaper rate. Both are alike wanting in maps that are indispensable for the quick apprehension of many references in the text. There should be a revised edition under careful superintendence.

Though the efforts of the Palestine Exploration Fund have been expended chiefly upon excavations in Jerusalem, various parties acting under its auspices or co-operating in its plans have made Palestine at large and the adjacent deserts the field of their explorations. The results of these expeditions, some of which were conducted scientifically, are given in Part II. of "The Recovery of Jerusalem," under the following titles: Sea of Galilee, by Captain Wilson, R. E.; The Architectural Remains of Palestine, by R. Phené Spiers, Esq.; the

* Dean Stanley's Introduction to *The Recovery of Jerusalem*.

Hauran, by the Count de Vogüé; The Survey of Palestine, by Lieutenant Anderson, R. E.; On the Pottery and Glass found in the Excavations, by the Rev. Greville J. Chester; Moabite Stone; Sinai, by the Rev. F. W. Holland.

The points of interest in Captain Wilson's paper are the identification of the fountain at Tabigah with the fountain of Capernaum, and the identification of Khersa on the left bank of Wady Semakh, with the Gergesa of the demoniacs and the swine. Describing the fertility of Gennesareth, Josephus says: "It is also watered by a most fertilizing fountain, which the people of the region call Kapharnaum. This some have thought to be a vein of the Nile; because it produces fish similar to the *Coracinus* of the lake near Alexandria." * There are in the plain of Gennesareth two large fountains, Ain-et-Tin, on the shore near the head of the plain; and Ain Mudawarah, or the "Round Fountain," a mile and a half back from the lake, near the southwestern corner of the plain. There are no ruins of consequence near the latter; but near Ain-et-Tin are the ruins of Khan Minyeh, which Robinson regards as the site of Capernaum. He argues that the city was near the fountain, but admits that Ain-et-Tin, though it occasions a luxuriant verdure in its vicinity, does not irrigate the plain. North of Khan Minyeh, a cliff that bounds the plain of Gennesareth in that direction, is the charming little bay of Et Tabigah, and a great spring, by far the largest in Galilee, estimated to be more than half the size of the celebrated source of the Jordan at Banias. The remains of a reservoir and an aqueduct show that the waters of this fountain were once raised to a higher level, carried for some distance along the side of the hill, and then conducted round the Khan Minyeh cliff, by an excavation in the solid rock, to a point whence they could be distributed over the plain of Gennesareth for the purpose of irrigation. Many travellers, Robinson among them, had noticed this excavated channel in the cliff; but Captain Wilson appears to have been the first to trace its connection with the fountain at Tabigah, and to identify that with the fountain of Capernaum. About a mile and a half northward from this fountain, upon the shore of the lake, are the extensive ruins of Tel Hum,

which cover a wide area, and include the remains of a large synagogue, evidently of high antiquity. Captain Wilson favors the view of Dr. Wilson, Ritter, and others, that these ruins mark the site of Capernaum ; yet he adds with modesty : " It is very desirable that extensive excavations should be made both at Khan Minyeh and Tel Hum, as, until this is done, it is impossible to say with certainty which is Capernaum." *

Captain Wilson is so fair in recognizing the services of other explorers, that it must have been an oversight which omitted to credit to Dr. Thomson the identification of *Khersa*, on the left bank of Wady Semakh, as the " Gergesa " of the " possessed " herd of swine. Dr. Thomson † sets forth very conclusive reasons for this identification, and then argues against the traditional site at *Um Keis*, that there the swine " must have raced across a level plain several miles before they could reach the nearest margin of the lake." Captain Wilson reiterates Dr. Thomson's arguments in favor of *Khersa*, and then protests against " the extraordinary blunder of placing the scene of the miracle at Gadara, now Um Keis, a place from which the swine would have had a hard gallop of two hours before reaching the lake." ‡ This is probably an instance of unconscious appropriation of the ideas and almost the language of another.

Captain Wilson gives a description of the Sea of Galilee, which sets it before one as in a mirror : —

" The lake is pear-shaped, the broad end being towards the north ; the greatest width is six and three quarter miles, from Mejdel, ' Magdala,' to *Khersa*, ' Gergesa,' about one third of the way down, and the extreme length is twelve and a quarter miles. The Jordan enters at the north, a swift, muddy stream, coloring the lake a good mile from its mouth, and passes out pure and bright at the south. On the north-western shore of the lake is a plain, two and a half miles long and one mile broad, called by the Bedouin El Ghuweir, but better known by its familiar Bible name of Gennesareth ; and on the northeast, near Jordan's mouth, is a swampy plain, El Bathshah, now much frequented by wild boar, formerly the scene of a skirmish between the Jews and Romans, in which Josephus met with an accident that necessitat-

* Page 387 ; p. 301 Am. ed.

† Land and Book, II. 35.

‡ Page 369 Eng. ed. ; p. 287 Am. ed.

ed his removal to Capernaum. On the west there is a recess in the hills, containing the town of Tiberias; and on the east, at the mouths of Wadys Semakh and Fik, are small tracts of level ground. On the south the fine open valley of the Jordan stretches away towards the Dead Sea, and is covered in the neighborhood of the lake with luxuriant grass.

“The hills, except at Khan Minyeh, where there is a small cliff, are recessed from the shore of the lake, or rise gradually from it; they are of no great elevation, and their outline, especially on the eastern side, is not broken by any prominent peak; but everywhere from the southern end the snow-capped peak of Hermon is visible, standing out so sharp and clear in the bright sky that it appears almost within reach; and, towards the north, the western ridge is cut through by a wild gorge, the Valley of Doves, over which rise the twin peaks or Horns of Hattin. The shore line, for the most part regular, is broken on the north into a series of little bays of exquisite beauty; nowhere more beautiful than at Gennesareth, where the beaches, pearly white with myriads of minute shells, are on one side washed by the limpid waters of the lake, and on the other shut in by a fringe of oleanders, rich in May with their blossoms red and bright.”*

Captain Wilson gives a graphic description of the suddenness and violence with which storms burst over the Sea of Galilee, fully corroborating the account of the Evangelists, how “there came down a storm of wind on the lake, and the waves beat into the ship so that it was full.”

The monograph by Lieutenant Anderson on the Survey of Palestine is a paper of much scientific value. His Reconnoissance Survey extended only from Banias, the northern limit of Palestine, along the line of the Jordan valley, by the western highlands, to Jerusalem. The instruments employed were an eight-inch sextant, an artificial horizon, a small theodolite for measuring angles, two measuring-chains, a pocket prismatic compass, four pocket chronometers or watches, one mercurial and one aneroid barometer. The results of this survey are given upon the map of the Ordnance department, chiefly in the more accurate determination of many points of historical interest. Yet, in the words of Lieutenant Anderson,—

“The amount of work accomplished, compared with what remains to be done, is as the seam of a coat to the whole garment. The vast system

* Recovery of Jerusalem, pp. 338, 339; Am. ed. 263, 264.

of valleys east and west of the line we have followed has still to be examined. There is not a hill-top on the ridges between them that does not contain the ruins of some ancient city; and the work that has been commenced should not cease till the topography of the whole of Palestine has been carefully worked out. . . . The success which has hitherto crowned the efforts of Dr. Robinson and other explorers in identifying the old sites is sufficient to insure still further discoveries following upon more extended examination. The land is now undergoing changes; the people are dying out or emigrating; the old habits and customs are disappearing; and no time should be lost in completing the work before the levelling hand of civilization shall have effaced the relics of the past.”*

Thus far the papers which make up the volume entitled “The Recovery of Jerusalem” have exhibited the modesty of true science and an appreciative regard for the labors of others, especially of our distinguished countryman, Dr. Robinson. Quite in contrast with these, in both respects, is the concluding paper on “Explorations in the Peninsula of Sinai,” by Rev. F. W. Holland. It opens in this vein:—

“At last the obscurity which has so long hung over the peninsula of Sinai, with regard to the possible determination of the route of the Israelites through the desert, has been removed. . . . We have had gathered up by professional men, the well-known accuracy of whose work places their reports and maps beyond suspicion, all the materials that the desert affords for setting at rest the important topographical questions which have been at issue.”

Mr. Holland’s own contribution to this result is stated in these words:—

“It was my privilege to form one of the exploring party; having been requested, in consequence of my knowledge of the country and personal acquaintance with the Arabs gained during three previous visits in 1861, 1865, and 1867, to accompany the expedition in the capacity of guide.”

In other words, the professional men of the expedition said to this *Hobab*, “Leave us not, we pray thee; forasmuch as thou knowest how we are to encamp in the wilderness, and thou mayest be to us instead of eyes.” What Mr. Holland professes to have accomplished in the peninsula of Sinai is

* Page 471; Am. ed. p. 366.

summed up in somewhat exulting language by Dean Stanley: "The spot of the passage of the Red Sea; the course of the Israelites by the Wady Useit and the Wady Tayibeh; the identification of the Wilderness of Sin with the plain of El Murkhah; the identification of Rephidim with Feiran, and of the sacred hill of Aaron and Hur with the eminence crowned by the ruins of Paran; the identification of the Ras Sufsâfeh and the plain of Rîhah with the scene of the giving of the Law and the Israelite encampment; the probable change in the resources of the wilderness; the comparatively modern date of the Sinaitic inscriptions." Now every one of these points, with the exception of the very doubtful identification of Rephidim with Feiran, was established by Dr. Robinson in his journal of 1838; and the suggestion of Ras Sufsâfeh as the Sinai of the Exodus was original with him. One would suppose that Mr. Holland had never heard of Robinson, for he does not once mention his name, though he follows very closely his line of argument; but that Dean Stanley should have given Mr. Holland the credit of establishing points long ago settled by Robinson can be accounted for only by the intimation with which he opens his Preface, that of late years the pressure of other occupations has rendered him less familiar with a field in which he was once acknowledged as a master.

Though Mr. Holland has added nothing to our knowledge of the peninsula of Sinai, the splendid photographs of the Ordnance Survey have spread before the eye of the student the most impressive localities and the most valuable details of the whole region; and the map, when completed, will doubtless approximate a satisfactory determination of all important points. It is a serious defect in "The Recovery of Jerusalem" that the volume was published without the maps so necessary to the understanding of the text, and which are constantly referred to in the narrative.

While candor compels us to speak disparagingly of Mr. Holland's ambitious essay, we cannot too highly praise Mr. E. H. Palmer's report upon the Desert of the Tih and the country of Moab. To a conversational knowledge of the Arabic, and a practical acquaintance with the peculiarities of the several tribes of the Sinaitic peninsula, and the region of Moab, Mr.

Palmer unites sagacity, self-control, patience, perseverance, practical science, good powers of observation, a knowledge of history and of physical geography, and a fund of good-nature and good health,—admirable qualities all for a desert explorer. He was accompanied by Mr. C. F. Tyrwhitt Drake, a gentleman who possesses a thorough knowledge of natural history, and has been for years engaged in Eastern travel. These two congenial travellers, equipped with a single tent, supplies for three months, and surveying and photographic instruments,—their whole outfit carried upon four camels,—journeyed on foot, in a zigzag course, a distance of 600 miles in the “Wilderness of the Wanderings,” making accurate notes of every feature, and visiting every point to which tradition, rumor, or conjecture had attached anything of archæological or Biblical interest. Their journey in this desert consumed seventy days, and forty-five days more were expended in exploring Moab. The fine Route Map of the Negeb and the Tih prefixed to their report, with their daily stations marked, shows how thoroughly their work was done. Among the more important results of the explorations are the following: No fossils were found in the country, nor any inscriptions, except the Arab tribe marks. In the heart of the peninsula, north of the line of et-Tih, is an extensive mountain plateau called Magráh, which is intersected by several broad wadies. To the west of this plateau, and forming the eastern border of the desert of et-Tih, are a number of lower mountain groups, amidst which the wadies which take their rise in the heart of Jebel Magráh meander on their way to the sea. This country is much more fertile than the open plain. Throughout this region are evidences of ancient cultivation and of a degree of fertility capable of sustaining a large population. Dams and reservoirs for husbanding water, wells now choked with sand and *débris*, sowing-fields, pits for storing wheat, and threshing-floors, terraces along the hill-sides, and innumerable heaps known by the Arabs as “grape mounds,”—these, together with frequent traces of settlements, sometimes of large towns, show that the desert was once the settled abode of a numerous people. Even now there are scenes of enchantment in the midst of the arid waste. “The Wady Birein, a broad valley taking its rise in Jebel Magráh, was filled

with verdure ; grass, asphodel, and 'oshej grew in great profusion ; flowers sprang beneath our feet ; immense herds of cattle were going to and fro between us and the wells, and large flocks of well-fed sheep and goats were pasturing upon the neighboring hills. Large numbers of donkeys and some horses were also feeding there." This state of things may solve the question touching the support of the cattle of the Israelites during their sojourn in this Wilderness.

Mr. Palmer is inclined to bring the ancient line of cultivation in Palestine much farther to the south ; placing the frontier of the Negeb or South country at *Ain Gadis*, which he identifies with *Kadesh*, in latitude $30^{\circ} 30'$ N., a whole degree south of Hebron. Eshkol he would place in that immediate vicinity ; and "it is a curious fact that among the most striking characteristics of the Negeb are miles of hillsides and valleys covered with the small stone-heaps in regular swaths, along which the grapes were trained, and which still retain the name of *teleilát-el-anab*, or grape-mound."

The Zephath of the Exodus is probably identified in *Esbaitá*, where are the remains of a fort or tower, and of three churches, among the ruins of a once extensive town. In some of the ruins of this desert, Mr. Palmer fancies that he has found traces of an Israelitish camp, or of some primeval structure. His narrative, in itself full of vivacity, makes the Exodus live once more amid the realities of history.

In Moab he was less fortunate. The discovery of the famous stone, and the lavish expenditure of De Sauley and other travellers, had made the Arabs more jealous and rapacious than ever. His belief is "that *above ground*, at least, there does not exist another Moabitish stone, but that many treasures lie buried among the ruins of Moab." Indeed, the whole region east of the Jordan — Moab, Edom, Ammon, Bashan — remains to be explored in the light of modern science. Particularly inviting is the ancient territory of Bashan, now better known under the name of the Hauran. Count de Vogüé, who has furnished to the volume on Jerusalem a brief paper upon this district, says truly, that "there is not one more interesting or less known than the Hauran. Its riches, both natural and archæological, its retired position, and the manners of its inhab-

itants, all combine to render it, above all other places, worthy of exciting the curiosity of the traveller."

Thoroughly to explore the Hauran, the traveller should first make favor with the Druses ; go there under their protection, as the guest of affiliated tribes, and, adopting the manners of the country, should reside long enough to discover all the treasures known to his jealous hosts. The American Committee for the Exploration of Palestine, acting in harmony with the English Palestine Exploration Fund, have resolved to make this region the special field of their labors in the ensuing autumn. They propose to send out a thorough linguist and a competent naturalist, who shall first domicile themselves among the Druses, and then explore the Hauran as they shall be passed along, under the inviolable *khoué*,—the symbol of friendship,—from tribe to tribe of the Bedouin. In their circular the Committee say : "This district contains a greater number of unexplored sites and of extensive ruins than any other district of equal extent in the world. Many inscriptions are also known to exist throughout the country, which have not been copied, and which may yet prove to be of the highest interest to the historical and Biblical student. The discovery of the Moabitish inscription illustrating incidents mentioned in the Second Book of Kings, renders it highly probable that there still exist similar records of ancient times and races. For the exploration of this territory the Committee have matured a plan which can be accomplished at a moderate expense, and which promises important results." The alternative of this plan would be an expedition in force, equipped and protected by the government.

This enterprise appeals equally to men of all beliefs, and to scholars in every department of knowledge ; and Americans should feel a just pride in maintaining for their country that honorable precedence in Syrian exploration which has been won by Robinson, Smith, Lynch, Thomson, and Barclay.

Jos. P. THOMPSON.

ART. VI.—CRITICAL NOTICES.

1.—*Rig-Veda-Sanhita. The Sacred Hymns of the Brahmans translated and explained by F. MAX MÜLLER.* Vol. I. *Hymns to the Maruts or the Storm-gods.* London: Trübner & Co. 8vo. pp. clii, 263. 1869.

EVERY one, nowadays, who knows anything about ancient literatures and ancient creeds, knows the exceptional interest belonging to the Hindu Veda, both as a literary and as a religious monument. Almost every one, too, knows the difficulty of entering this great mine of primeval thought and belief,—from which, it is true, many treasures of golden ore have been brought to day, but which has never been thrown fully open to the explorer. With its exploration the name of Professor Müller has for long years been closely and conspicuously connected; and now that we have from his hand the beginning of a translation, and a fully annotated translation, or *traduction raisonnée*, as he styles it, of the Veda, it cannot be otherwise than important to see in what spirit he has undertaken the work, and with what success.

This is the more necessary, inasmuch as probably no one has opened the volume without experiencing, in one respect, at least, a severe disappointment. Müller's translation had been announced by his publishers as to form eight volumes; in fact, it is still so advertised. This may have been the result of a misunderstanding, or else perhaps the estimated octamerism of the work was meant to be understood in some peculiar sense, not obvious to those who were asked to subscribe for it; but when the first of the eight appeared, and was found to contain only twelve hymns out of the more than a thousand that make up the Rig-Veda,—or, in verses, just about *one seventy-fifth* of the whole text,—people could not help asking with what and how essential matter the other pages of the stout and costly volume were filled, for whose benefit such immense breadth of treatment had been intended, and whether it was, after all, for the common advantage, and a thing that the general public ought gladly to submit to, for the sake of the more special scholars to whom it might be as good as indispensable.

It does not, however, take a long examination to satisfy one that the volume is not wholly innocent of padding. Thus, in the first three hymns translated (with one of the later ones), precisely one quarter of the double page, as it lies open, is occupied with Müller's version. The whole lower half is filled with the versions of his three predecessors, Wilson, Benfey, and Langlois, given “for the sake of comparison.”

But who is to make the comparison? Not those who know nothing of the Vedic language, and cannot test each of the four by the original; they, of course, could make no intelligent choice, and would be likely to be captivated by the smoothest or most spirited rendering. Not, again, the Vedic scholar; he has the other three already on his shelves; he wants to know how Müller understands a given passage, and will find for himself the materials of whatever comparison he cares for. One of the two remaining half-pages contains the transliterated text of the hymn itself; and this is equally a superfluous addition; the student of the Veda has it in another form, and does not want it here; the public at large can only stare at it with wondering eyes. This useless transliterated Vedic text accompanies all the translations given, and seems intended to accompany all that shall follow; and it is not even added compactly at the foot of the page, but is spaced out to fill the same room with the much more bulky English version opposite. It is a complete waste, and we trust that Professor Müller may be persuaded to leave it out in the remaining volumes of the series.

The supererogatory matter thus described does not, it is true, count for very much in a volume made up as this is. With all its dilution, the translation occupies less than an eighth part of the pages placed in our hands. More than four times as much space (or 214 pages against 49) is given to the notes, or commentary. This commentary, to the mind of its author, is so important a part of his work, that upon the strength of it he "ventures to call his own the *first* translation of the Rig-Veda." The propriety of this claim will appear as we go on; at present, we have to look at the character of the notes themselves. They are, we are told, intended to present "a full account of the reasons which justify the translator in assigning such a power to such a word, and such a meaning to such a sentence." "I mean by translation a real deciphering," adds our author, "a work like that which Burnouf performed in his first attempts at a translation of the Avesta." This comparison with Burnouf's work does not seem quite in point. It is well known that the great French scholar produced two or three bulky quartos upon the Avesta, in which he accomplished the translation and exposition of only a few paragraphs of its text. But, in the first place, he called it a "commentary," not a "translation." And, in the second place, the circumstances of the two cases are as unlike as they can possibly be. The Zend language, when Burnouf took it up, was a *terra incognita*, and a most difficult and perplexing field of investigation. It partook of the nature of an inscription in an unknown language; it had to be deciphered. A mere version there, without full exposition of the methods by which it was obtained,

would have been unintelligible and valueless. Burnouf's aim was to point out the way to others, to show them what they had to do if they would read the Zend and interpret the hidden meaning of the Zoroastrian scripture. His work was therefore essentially inceptive and incapable of completion, and it always remained a fragment. As for the *Veda*, it occupies — with a marked difference, to be sure, of degree — a like position with the *Iliad*, or the *Psalms*: its method of interpretation is obvious, and the materials far from scanty; many scholars have been long engaged in its study, and have rendered parts or all of it, with more or less success, according to their opportunities and capacities; they have gone through, over their own tables, with processes of research and comparison in part identical, in part analogous, with those which Müller writes out at full length and breadth in his notes, claiming simply on the score of having done so the honor of being first translator, — an honor which we imagine that the community of Vedic scholars will be very slow to award him, at the expense of such men as Benfey and Wilson and Roth and Muir and Aufrecht; or even of Langlois.

And they will be the slower to do so, inasmuch as he is far from redeeming his promise to account fully for every word and sentence of his translation. Such a promise, indeed, is in the nature of things incapable of being redeemed; one might write a volume about a single hymn, instead of a whole dozen, and still overlook important points, or treat them imperfectly. This being so, every translator making the pretensions that Müller makes must be held to account for the judgment with which he selects his points for detailed treatment, and the economy with which he expends his limited and precious space. If he tithes the mint and anise and cummin, and omits the weightier matters, we shall condemn his work as so far a failure. And that this is the case with Müller is, in our opinion, incontestable. Let us take the first verse of his translation as a specimen, and test a little its quality.

It reads: "Those who stand around him while he moves on, harness the bright red steed; the lights in heaven shine forth." To this we have the note that "The poet begins with a somewhat abrupt description of a sunrise. Indra is taken as the god of the bright day, whose steed is the sun, and whose companions the Maruts, or the storm-gods": and then Professor Müller runs off into an interminable note about the word *arusha*, 'red,' translated in the verse 'red' [steed], a note actually occupying eleven pages and a half, and involving the detailed citation and translation of some scores of Vedic passages, with a refutation of the views taken respecting sundry of them by the St. Petersburg Sanskrit lexicon. All this would be very much in place in

a monograph, or as preliminary study to a dictionary-article on *arusha*; but so little has it to do with the exposition of this particular verse that it is great matter of question whether Müller, after all, translates the word correctly here. The next verse, namely, goes on to state that "they harness to the chariot on each side his (Indra's) two favorite bays." Why this, if his saddle-horse was already saddled and bridled? Or did the latter "move on" so fast while they only "stood around," that it escaped their hands, so that they had, as the next best thing, to turn to and put the double team into the wagon, that the impatient god might not lose his ride up the firmament? Surely, if the horses are harnessed in the second verse, and if the two verses belong together, it must be the "bright red *chariot*" that is harnessed (for the verb is one that is freely employed of either chariot or horses) in the first. Or can Professor Müller prove to us that the sun may be taken as Indra's steed, but not as his chariot? Something from the rest of the Veda to illustrate the relation of the sun and Indra, who is no solar deity, would have been far more welcome than the discussion about "red." Again, who are the bystanders here referred to? and how can they stand about, and yet harness something that is moving onward? Is this such a satisfying conception that it should justify an extremely violent and improbable grammatical process like that of rendering *pári tashúshas* as if the reading were *paritashivá'nsas*? The participial form *tashúshas* has no right to be anything but an accusative plural, or a genitive or ablative singular; let us have the authority for making a nominative plural of it, and treating *pári* as its prefix,—and better authority than the mere *dictum* of a Hindu grammarian to the effect that the two forms are interchangeable. To us the passage seems most probably one of those not infrequent ones in which forms of the two roots here found are set over against one another, as signifying the 'moving' and the 'fixed' or 'persistent': 'moving forth from that which stands fast'; that is to say, the sun's orb swings itself up into the firmament from among the immovable hills out of which he seems to rise. Once more, by rendering the last third of the verse 'the lights in heaven shine forth,' the translator both misses the assonance found in the original, *rocante rocanā*, and makes the expression tame by connecting the locative with the noun instead of the verb: render rather 'gleams glimmer in the sky,' or 'a sheen shines out in the sky,' or something like this.

We do not mean that this verse should be taken as a specimen of Müller's best work as a translator and commentator, or even of his average work. But it does bring to light, if in an exaggerated form, some of his characteristic faults. His notes are far from showing that

sound and thoughtful judgment, that moderation and economy, which are among the most precious qualities of an exegete. On the contrary, they display a degree of heedless lavishness, in matter, style, and mode of printing, as if the author were in too much haste to be either select or concise, or as if his one main object had been to fill out the covers of a volume, with as little expense to himself as possible. Of course, he presents us with much that is very valuable, and which all students of the Veda will accept with lively gratitude; but this he dilutes with tedious exhibitions of processes where results would have been sufficient, and with dwelling upon trifles while serious difficulties are slipped over unnoticed. He appears to be suffering under a confusion of the wants of the general reader with those of the special scholar; and, trying to please both, he satisfies neither. With one or two exceptions (notably Professor Roth of Tübingen, and perhaps also Professor Aufrecht of Edinburgh), Müller is, among all living scholars, the one who has studied the Veda most deeply, and whose version of its hymns would carry the greatest weight of authority. But the authority of any particular part of it would be best supported by the perceived success of the work as a whole, by its distinctness, its consistency, its intelligibility and readableness. While Müller's fellow-students would greatly have preferred more translation and less explication, it is, after all, the public at large whom he will have most disappointed;—the public, who were hoping for a work that should show them what the Veda really is, and should put it in an attractive light before them. Both classes alike will be slow to purchase the beginning of a series which seems likely to stretch itself out indefinitely, and after all to remain forever a fragment.

Burnouf, with all his extraordinary ability, was an unfortunate model to select. He was essentially a pioneer and pathmaker. His versatile and enterprising genius had no sooner forced its way into the heart of some difficult subject, working out the method of investigation to be pursued, than he abandoned it and turned to another. Thus his results were always incomplete and fragmentary. In the Veda he never did anything which was of advantage outside the circle of his personal pupils. In the classical Sanskrit, he began, in a style of costly luxury, the publication and translation of an immense work of modern origin and trivial value (the Bhāgavata Purāna), and broke it off in the middle. In Zend he performed his most fruitful labor; but, presently laying it aside, he gave himself to the history of Buddhism. Here, too, his researches laid the foundation upon which all who come after him must build; but he himself soon ceased to build on it, and threw himself wholly into the Assyrian inscriptions. In this last department,

where his aid would have been of incalculable value, he had not yet begun to produce for the world, when his untimely and lamented death cut short his useful activity. Burnouf was a giant in whose footsteps ordinary men should not try to walk; but Müller, unless he changes materially the scale of his *Veda*-translation, is likely to resemble him at least in leaving behind him an unfinished work; even should he realize the current prayer of the Vedic poets, and "live a hundred autumns."

It is doubtless in order to give, at any rate, a secondary kind of completeness to his work, that Müller takes up first the hymns to a certain order of deities; and his plan is in this respect decidedly to be approved. He promises to finish in the next volume the hymns to the Maruts. Why he selected this particular class he does not inform us; perhaps it is because they are not numerous, and have not been much worked upon by previous translators. Of course, he has the right to choose what he will to begin with; only we, on our part, cannot help criticising his choice, and wishing that it had been made differently. If it was any part of his aim to give a foretaste of the contents of the *Veda* which should be an engaging one, and to tempt those who dipped into it to pursue the study further, he could not well have made a more unfortunate selection. The Maruts, or storm-gods, are an uninteresting set of beings. They hover on the confines between the natural and the supernatural, between the merely phenomenal and the deified and divine. They have a vague and indistinct individuality, and are infertile of mythology and lively and fanciful description. And as they are, so are also their hymns. He who reads through the versions given in this volume, and asks for more of the same, must be sustained by a more than usual interest which he has brought to the work from without. If our author, on the contrary, had prefaced his series of versions with the hymns to the Dawn — which, considering his known predilection for that element in Indo-European mythology, we might almost have expected him to do — or with a selection of hymns of various subject, containing rich mythologic material, with perhaps a tinge of human interest also, he would have made a far more favorable impression, effectively fostering a study whose advance he certainly has greatly at heart.

To the nature of the themes treated we have unquestionably to attribute in great part the tediousness of Müller's versions. But not wholly to this. It appears in his other works as well as here, that that remarkable facility and beauty of style which distinguishes in general his English compositions fails him in translation. Perhaps this is the severest of all tests of a foreigner, the power to translate into nervous

and lively phrase in a language not his own: certainly, all our author's renderings, so far as we know them, are a little tame and spiritless. But we think it is also true that he has taken the work of translation somewhat too easily, put too little of his force into it, and been content to render words and phrases instead of determining to gain a vivid apprehension of a hymn as a whole and to reproduce it as it impressed him. We sorely miss, too, the poetic form. We were disposed, indeed, when reading his introduction, to assent to his claim that "it was out of the question in a translation of this character to attempt an imitation of the original rhythm or metre. . . . At present a metrical translation would only be an excuse for an inaccurate translation"; but we have come to question whether he was right. It certainly is not impossible to make a metric version which shall reproduce with sufficient fidelity one's idea of an original; it may require considerable labor; but if we are to have only a dozen hymns in a volume, we have a right to expect that dozen to be elaborated to the very highest degree. Especially have we been made doubtful of Müller's canon by seeing what Roth has accomplished. In the last volume, namely, of the Journal of the German Oriental Society (Vol. XXIV., 1870, pp. 301 ff.), that great scholar has given a rendering, in the metre of the original, of two Vedic hymns, with brief accompanying comments, by way of setting forth what would be his idea of a desirable translation of the Veda. One of the two is of the dozen contained in Müller's volume; and, in order to set the two methods side by side, we have ventured to turn Roth's version (with some modifications) into metrical English; without at all claiming to give again faithfully the terseness and vigor of his German verse.

Müller translates as follows:—

The Prologue.

The sacrificer speaks:

1. With what splendor are the Maruts all equally endowed, they who are of the same age, and dwell in the same house! With what thoughts! From whence are they come? Do these heroes sing forth their (own) strength because they wish for wealth?
2. Whose prayers have the youths accepted? Who has turned the Maruts to his own sacrifice? By what strong devotion may we delight them, they who float through the air like hawks?

The Dialogue.

The Maruts speak:

3. From whence, O Indra, dost thou come alone, thou who art mighty? O lord of men, what has thus happened to thee? Thou greetest (us) when thou comest together with (us), the bright (Maruts). Tell us then, thou with thy bay horses, what thou hast against us!

Indra speaks :

4. The sacred songs are mine, (mine are) the prayers; sweet are the libations! My strength rises, my thunderbolt is hurled forth. They call for me, the prayers yearn for me. Here are my horses, they carry me towards them.

The Maruts speak :

5. Therefore, in company with our strong friends, having adorned our bodies, we now harness our fallow deer with all our might; — for, Indra, according to thy custom, thou hast been with us.

Indra speaks :

6. Where, O Maruts, was that custom of yours, that you should join me who am alone in the killing of Ahi? I indeed am terrible, strong, powerful, — I escaped from the blows of every enemy.

The Maruts speak :

7. Thou hast achieved much with us as companions. With the same valor, O hero, let us achieve then many things, O thou most powerful, O Indra! whatever we, O Maruts, wish with our heart.

Indra speaks :

8. I slew Vritra, O Maruts, with (Indra's) might, having grown strong through my own vigor; I, who hold the thunderbolt in my arms, I have made these all-brilliant waters to flow freely for man.

The Maruts speak :

9. Nothing, O powerful lord, is strong before thee; no one is known among the gods like unto thee. No one who is now born will come near, no one who has been born. Do what has to be done, thou who art grown so strong.

Indra speaks :

10. Almighty power be mine alone, whatever I may do, daring in my heart; for I indeed, O Maruts, am known as terrible: of all that I threw down, I, Indra, am the lord.

11. O Maruts, now your praise has pleased me, the glorious hymn which you have made for me, ye men! — for me, for Indra, for the powerful hero, as friends for a friend, for your own sake and by your own efforts.

12. Truly, there they are, shining towards me, assuming blameless glory, assuming vigor. O Maruts, wherever I have looked for you, you have appeared to me in bright splendor: appear to me also now!

The Epilogue.

The sacrificer speaks :

13. Who has magnified you here, O Maruts? Come hither, O friends, towards your friends. Ye brilliant Maruts, cherish these prayers, and be mindful of these my rites.

14. The wisdom of Mânya has brought us to this, that he should help as the poet helps the performer of a sacrifice: bring (them) hither quickly! Maruts, on to the sage! these prayers the singer has recited for you.

15. This your praise, O Maruts, this your song comes from Mândârya, the son of Mâna, the poet. Come hither with rain! May we find for ourselves offspring, food, and a camp with running water.

Roth adds to his version the following account of the story, so to call it, of the hymn:—

“ The singer inquires (vv. 1, 2) whither the Maruts, the winds, whose whistling he hears, are hastening, and who is going to succeed in detaining them at his sacrifice. Then, in the form of a dialogue between the Maruts and Indra (3 – 12), the praises of the former are intended to be set forth; and this object is not unaptly accomplished, since, although the highest glory is given to Indra, their praise is finally put in the god's own mouth. Indra, so the dialogue runs on, usually united with the Maruts in lively course, goes this time alone, and is asked by them why he does not take them with him. He makes the evasive answer that he is on the way to a sacrificial feast; whereupon they are ready and eager to accompany him (5). Indra retorts derisively that they, who are all on hand for junketing, were not quite so forward when the matter impending was the dangerous fight with the dragon, whom he alone had slain (6). The Maruts have nothing to plead against this, but merely call to mind, with self-satisfaction, that they and Indra have done great things together, and that they mean to prove themselves his faithful allies in the future also. Indra has no mind to share his glory with them, and boasts (8) again of his exploits: and the Maruts are fain (9) to acknowledge his might without reserve, and extol him as the chief of the gods. This pacifies the god; he vaunts himself once more (10), but also thanks the Maruts for their frank and hearty homage, and declares that the sight of them delights his heart (12). Thus their reconciliation is sealed. In the closing verses (13 – 15) the poet turns to the Maruts themselves, and, naming himself, seeks to attract their attention to the feast prepared for them and to his skilful song of praise, and to win them to be present with their gifts.”

And the hymn itself reads thus:—

THE POET:

1. Upon what course are entered now together,
Of common age, of common home, the Maruts?
With what desire, and whence, have they come hither?
The heroes make their whistling heard for longing.
2. Whose prayers and praises are the youths enjoying?
Say, who hath turned the Maruts to his off'ring?
As they go roving through the air like falcons,
How shall we stay them with our strong devotion?

THE MARUTS:

3. How comes it, Indra, that thou goest lonely,
Though else so blithe? tell us what ails thee, master.
Thou 'rt wont to talk with us as we go onward;
Lord of the coursers, what hast thou against us?

INDRA :

4. I love the prayers, the wishes, the libations;
 The odors rise; the *soma*-press is ready;
 They draw and win me with their invocation;
 My coursers here carry me on unto them.

THE MARUTS :

5. So then will we, along with our companions,
 The free and mighty, putting on our armor,
 Harness at once our spotted deer with pleasure.
 Thou com'st exactly to our wish, O Indra!

INDRA :

6. And where then was that wish of yours, ye Maruts,
 When me ye sent alone to slay the demon?
 But I, the fierce, the powerful, the fearless,
 Have struck down every foeman with my weapons.

THE MARUTS :

7. Thou didst great things when we were thy companions,
 By our united manliness, O hero!
 For many feats can we achieve, O mightiest,
 Indra, with power, whene'er we will, ye Maruts!

INDRA :

8. I Vritra slew, ye Maruts, by my prowess,
 And my own fury 't was that made me fearless.
 'T was I, with lightning armed, who made these waters,
 All sparkling, flow in easy streams for Manu.

THE MARUTS :

9. Before thee, mighty one, is naught unshaken;
 Among the gods is no one found thine equal;
 None born, and none that's to be born, can reach thee;
 Do, thou exalted one, whate'er it likes thee!

INDRA :

10. Let my power only be without a limit;
 Wisely I finish all that I adventure;
 For I am known as terrible, ye Maruts!
 Whate'er I touch, Indra is soon its master.

11. Your praise, O Maruts, now hath given me pleasure,
 The worthy hymn that ye for me have uttered,—
 For me, for Indra, for the jocund hero,
 As friends should for a friend, with feeling hearty.

12. Truly they please me as they stand before me;
 In glory and in vigor they are matchless.

Oft as I've seen you, Maruts, in your splendor,
Ye have delighted, as ye now delight me.

THE POET:

13. Who hath exalted you like us, ye Maruts?
As friends go forth to friends, so come ye hither.
Ye bright ones, fan to ardor our devotions;
Of these my pious labors be ye heedful.

14. Here, where the singer aids the sacrificer,
And Mânya's art has gathered us together,
Ye Maruts, to the holy sage come hither!
These songs of praise the bard to you is utt'ring.

15. This is your praise, and this your song, O Maruts!
Made by Mandâra's son, the singer Mânya.
Come hither with refreshment for our strength'ning!
May we win food, and meadows rich in water!

If our transfer into English does not altogether fail to do justice to Roth's conception and interpretation of the original text, no one, we are sure, can fail to see how greatly inferior is Müller's translation. In Roth's hands, the hymn gains for the first time a unity of design and reality of interest, becomes an actual hymn, a creation of poetic art, such as we see might have kindled the minds and aided the devotions of a primitive people. This liveliness of apprehension, this determination to call nothing "translated" which is not made thorough good sense of, which is not understood in its whole connection and brought into a completely presentable shape, is characteristic of Professor Roth's mode of working, as illustrated by him with reference to the *Avesta* as well as to the *Veda*.* His version may be assailable in points of detail,—there may be words and phrases of which Müller's understanding is more accurate, as there unquestionably are others as to which both alike will hereafter be set right; but his ideal and his realization of it are markedly in advance of those of his rival.

It should not fail to be pointed out that Müller, in his Preface (pp. xii, xiii), speaks with the utmost candor and modesty of his own translation, as being, what every translation at the present time must be, "a mere contribution towards a better understanding of the Vedic hymns," which on many points "is liable to correction, and will sooner or later be replaced by a more satisfactory one"; and that he estimates fairly and acknowledges handsomely the labors of his fellow-scholars. How much of doubt and uncertainty still hangs over the whole subject may

* See his "Contributions to the Interpretation of the *Avesta*," in the current volume of the *Journal of the German Oriental Society*.

be clearly seen from the discordance, as exhibited above, between versions of the same passage by the two leading Vedic scholars, — which discordance appears still more striking when we compare the versions of the other three translators quoted by Müller. Its limits are gradually narrowing, as the Vedic grammar and vocabulary are becoming more thoroughly understood, and, yet more, as the Vedic antiquity, its circumstances, forms of thought, and creeds, are better comprehended ; we heartily wish that Müller might see — what appears so plain to many others — that he would hasten on the time of accordance most effectively by giving us as rapidly as possible the results of his efforts at translating, leaving us to infer or conjecture the methods of their attainment.

There is yet another element in the volume, to which we have as yet made only casual reference, — namely, the preface or introduction, of more than 150 pages. It is to be very summarily characterized, as almost wholly wanting in pertinence. About twenty-five pages constitute a real introduction to the translation ; the rest has nothing to do with translation at all ; it is a discussion whether certain hymns of the Rig-Veda, which pretty evidently did not belong to the text as at first made up, are or are not best treated as a supplement only ; it examines the relations to one another of different scholastic forms of the text ; it points out certain misreadings and errors of the press in the author's published edition of the Veda, and others which have crept into Aufrecht's transliterated edition, and so on ; and it ends with a protracted and in part polemical discussion of certain peculiarities of Vedic metre, having no bearing on interpretation. All has its interest and importance, to be sure ; but it does not belong here. If its author had no other opportunity of expressing his views on Vedic subjects before the world, we should not grudge his taking advantage of this one ; but the pages of a score of learned journals are eagerly open to him, and even the prefaces of his Rig-Veda volumes are a far fitter receptacle of such matter than the one which he has chosen.

On the whole, we hardly know a volume of which the make-up is more unfortunate and ill-judged, more calculated to baffle the reasonable hopes of him who resorts to it, than the first volume of Müller's so-called "translation" of the Rig-Veda : if the obligation of its title be at all insisted on, at least three quarters of its contents are to be condemned as "padding."

Müller's name has now for nearly a quarter of a century been associated in men's minds with the Rig-Veda. It was about the year 1847 that, having come to England with the simple design of completing his collection of materials for an edition of its text and commentary, he was, through the influence and aid of Wilson and Bunsen, taken

under the munificent patronage of the East India Company, and bidden to elaborate and publish his work in their service and pay. The *Veda* was not at that time begging for editors, and ready to accept whoever might offer, upon his own terms, and be thankful for him. One edition was already under way in India, and another nearly arranged for in Germany. Both these were broken off or laid aside in Müller's favor, his position being supposed to give him peculiar facilities for the speedy and satisfactory performance of the task he had assumed. He ought, it seems, to have felt strongly the obligation imposed on him by this abandonment of the field on the part of possible rivals. There was a large and rapidly growing body of students of Indian antiquity, waiting and longing for access to the oldest and most important work of the Indian literature, which he had undertaken to furnish them. Their disappointment has not been small. Six or eight years would have been ample time for finishing the work, if the editor had been willing to devote himself to it single-mindedly; now, after more than twenty years, two volumes out of six are still to be given. It was anticipated that, along with this great quarto edition with native commentary, he would employ his materials for a cheaper hand-edition of the text alone, for students' use. Such a one he in fact began; but after so long a delay, and in so unpractical and costly a style, that it met with no favor, and was continued only to the end of the first book (out of eight). The need has since been supplied by Aufrecht, with Weber's help, in the latter's serial, the *Indische Studien*; and Müller has irretrievably lost the honor and satisfaction of being the first editor of the *Veda*. If the great bulkiness of the native comment rendered his task a long and severe one, the rapidly depreciating value of that comment also enjoined upon him the utmost attainable expedition. Twenty years ago the help of the Indian expositors was welcome, and almost indispensable, to the Vedic student; now, European erudition has gone far beyond them, and their work is little more than a curiosity, worth examining for its own sake, as illustrating one conspicuous department of Hindu literary activity. Hence, when in the Preface to this volume Müller strenuously asserts and defends the former value of the comment as constituting its present claim to complete publication, he is guilty of a slight anachronism. In fact, he is frank enough to say later that it was of great use to him *in the beginning*, "though it seldom afforded help for the really difficult passages." And he shows us practically how it ought to be treated by a translator, by respectfully making mention of its versions, but then disrespectfully making no account of them, in constructing his own.

These explanations will serve to show why it is that Sanskrit scholars

do not feel themselves bound to any particular gratitude toward Müller for his labors upon the Rig-Veda. Whatever advantage his connection with it has brought to them, it has thus far brought infinitely more to himself personally. He claims, to be sure, on the first page of his Preface, that "it required no small amount of self-denial to decide in favor of devoting a life to the publishing of materials rather than to the drawing of results," plainly wishing us to infer that he had displayed this immense self-denial; but, only five pages later, he pleads further that, "after all one cannot give up the whole of one's life to the collation of Oriental MSS. and the correction of proof-sheets," and fairly confesses that "the two concluding volumes have long been ready for press, and as soon as I can find leisure they too shall be printed and published." Surely an astonishing instance of the blowing of hot and cold out of the same mouth! We have given above our reasons for believing that the translation now begun will not, unless its plan is speedily and radically changed, do much to increase the feeling of obligation toward its author. Not long ago there remained to him still the opportunity of striking a great stroke in behalf of Vedic study by making public the complete *index verborum* of the Rig-Veda which he must have had prepared for many years; but it is doubtful whether even that is left him now. On the whole, it seems as if he would be permanently remembered by scholars in connection with the Rig-Veda chiefly as the first (and only) editor of the great commentary of Sâyana.

2.—*The Life of John Adams. Begun by his Son JOHN QUINCY ADAMS. Completed by CHARLES FRANCIS ADAMS, JR. Philadelphia: J. B. Lippincott & Co. 2 vols. 1871.*

THE "London Athenæum" of April 1st, in a review of this Life, was pleased to say, "The American world will in time forget Adams!" With all possible submission to the better judgment of so infallible an authority, especially as to American affairs and American books, we must take leave to say that the American world will do no such thing. It may not be the wisest of worlds, and, like other worlds, it may have gone spinning away out of its proper orbit now and then, and appeared almost as foolish as some of the older worlds, but it does know and remember its friends; and ingratitude to its benefactors, at least after they are dead, is not one of the vices of this particular Republic. To be sure, its memory is not sufficient to hold in liveliest remembrance all who assisted at its birth and kept watch over its cradle. It is only a very few names for which posterity has room in its mind and of which

it can make household words of daily mention. They only who have identified themselves with great changes in human condition, with the great cardinal points on which history turns, can hope for more than an historical renown, a fame which is to be looked up in books, but does not come uncalled for and make a part of our daily lives. But of this small number of immortals, John Adams is one; and the American people, instead of forgetting him, we are sure will hold him in fresher and fresher remembrance as time goes on, and this for personal as well as historical reasons.

There are few eminent persons who have drawn so lifelike a portrait of themselves as he has done. His Journal is a marvel of self-anatomy and conscientious recording of the observations. It is no "Confessions," like those of Rousseau, uttered in the ear of the public as his Confession, and meditated and methodized with a single eye to the effect they were to produce on the minds of all and singular they should reach. He never imagined that the record he made of his feelings and opinions while a schoolmaster at Worcester, and a struggling lawyer at Braintree and in Boston, would ever be made the property of the world, and display him in all his weaknesses as well as his strength to all who chose to read. Had he never emerged from the obscurity of his first estate, and lived and died an unknown man, his Diary, unearthed a century after it was written, would have been a most interesting and valuable contribution to psychology as well as to history. Any man that will be at the pains to correct the defect which Momus pointed out in the making of man, and open the window in his breast through which the operations of his mind and the feelings of his heart may be observed and studied, may depend on being an interesting object to after generations, however insignificant may have been the sphere in which he moved. A human being is always an interesting subject of contemplation, if he be truly portrayed. It is this that makes the charm of genuine correspondence,—of letters which the writers never dreamed of ever meeting any other eye than that to which they were addressed. Madame de Sévigné, Lady Mary Wortley, and Cowper little imagined how delicious a part they were to form of the lives of us of whose existence they knew as little as we do of the contemporaries of our great-grandchildren. To read their letters is to listen to their most intimate conversations with their dearest friends and to catch their minds in dis habille. One never catches Horace Walpole so. He is always *en grande tenue*,—his hair powdered, his gold-laced coat and embroidered waist-coat on, and his sword by his side,—writing to us just as much as to Sir Horace Mann, Harry Conway, or Lady Ossory. And we shall have no more true correspondence of famous people. Every

celebrated man now, when he writes to his nearest and dearest, knows that posterity is looking over his shoulder and will not bate him a jot or tittle. And this knowledge is fatal to that *abandon* and reckless unreserve which is the soul and charm of genuine letter-writing. The more 's the pity.

John Adams's Diary and many of his letters would have been always interesting, not merely as perhaps the most ingenuous self-revelations of one's inward nature ever made, but as giving glimpses of a state of society which is now passed away. It carries us back to a time when, with infinitely less wealth than now, the inequalities of condition were more marked and the artificial distinctions of society recognized and respected, which were all swept away by the heady currents of the Revolution. The Boston of a century ago was a very picturesquely beautiful town, sitting on her three hills and looking over the estuary of the river Charles to the lovely heights of Roxbury and Brookline in one direction, and seaward to her magnificent harbor, gemmed with wooded islands, and stretching out into the infinite Atlantic, in the other. It was the richest town in the country, and exceptionally so just a hundred years ago, from the profits made in the Spanish and French wars of the middle of the last century. It contained a cultivated and refined society, living in garden-houses and in an expensive and luxurious manner, to which the wealthier inhabitants were always given, as appears from John Dunton's account of his visit to the Great Town about 1680, and from Oldmixon's, a generation later, who said, "An English gentleman visiting Boston might suppose, from the politeness of conversation and the costliness and elegance of dress and furniture, that he was in the metropolis of England." And it is on record that one thing which provoked the taxation of the Colonies was the accounts of the wealth of Boston, as displayed in furniture, plate, and entertainments, carried home by the officers who were welcomed there with frantic hospitality on their return from the conquest of Canada. The houses of the last century, those of Hutchinson, Clarke, Sir William Phips, Governor Bowdoin, and many others, now all swept away, but which stood within living memory, — the portraits of Copley, which preserve the dress of men and women of that day, the massive plate of which loads still remain in many old families, — testify to the elegance as well as plenty of the living of the richer classes before the Revolution. The excellent Dr. Kip, the Bishop of California, in an article in the "Galaxy" on New York in the last century, most unnecessarily endeavors to magnify his native city at the expense of Boston. The worthy prelate shows himself wofully ignorant of the Boston side of the story. Why, bless his soul, there was no time from 1650

to 1770 when the town of Boston could not have bought up, not only the city of New York, but the whole Province, including the manors and manor-houses of which he boasts so much, in which the Dutch magnates lived in the rustic plenty of rich farmers, as appears from Mrs. Grant's "Memoirs of an American Lady," rather than with the easy elegance of our wealthy gentlemen at their country seats near Boston, and indeed throughout New England. He tells us that the citizens of New York would collect in crowds to see the Patroon of Albany arrive in his coach and four, so rare were coaches a century or so ago! Let us tell him that no Boston boy would have turned his head to look at a coach from the time when as Judge Sewall (who kept one himself) records in his journal in 1698, he was met upon his return from circuit on the Neck by Lieutenant-Governor Stoughton "in his new coach," to that when Governor Hancock went in his coach and six to meet President Washington in 1789, after waiting in vain for the President to call on him first. We regret to say that this earliest attempt to vindicate State Rights lost the Father of his Country a good dinner, which was spoiled by the delay.

But all this is not violently to the purpose of John Adams's Life. Returning to which we would repeat that, had his life ended with the Revolution, his Journal would have made him a permanently interesting person from the insight it gives us into a human soul, and the peep it affords at the way of life of the generation that looks down upon us from the frames of Copley's pictures in powdered heads and wigs, and velvet coats and embroidered waistcoats, and lace ruffles and silks, satins and brocades. But it is doubly interesting as the portraiture of the mind which perhaps did more than any other to give form to the institutions, State and national, of the country, and to whose sturdy common sense, refined into statesmanship, we owe as much for the consolidation of our civil liberties as to any military hero who vindicated them with his sword. John Adams, by his reception of us into his intimate confidence through his Journal, is a flesh-and-blood entity to us, as very few of our Revolutionary worthies are. He is not perched up on a pedestal, like Washington, and made to look ten feet high, without spot or blemish, "a perfect monster which the world ne'er saw." He had plenty of small weaknesses, such as most of us have ourselves, only we generally take care to keep them to ourselves. He was a *grondeur* in small matters, not over well pleased to see people whom he thought no better than himself better off and enjoying more consideration than he. He accuses himself of envy, but it was a mild type of that malady, and it never struck into a vital part. His temper was hasty and not always angelic, in which particu-

lar he was by no means alone either among his contemporaries or preceding or succeeding generations. His state of mind during his youth and early manhood was doubtless that of thousands of other men working their way upwards from an humble and obscure condition, and struggling against the *vis inertiae* of those established in the position they wish to win, and against the jostling competition of a crowd of rivals engaged in the same eager strife. Happily, he can never be made an idol, a fetish superior to human frailties and infirmities, and endowed with impossible perfection, and will, therefore, have a firmer hold on the affection and esteem of common people, who prefer a man of like passions with themselves to the best tricked-out of demigods. The *Washingtonolatry*, what very eminent men—and notably the late distinguished Mr. Everett—have attempted to impose upon us as the Established Religion of America, has already begun to yield before the natural reaction of the human mind towards heresy in all such cases. The worthy Athenian who was tired of hearing Aristides called the Just, and wished to get him out of the way, was a type of one side of our fallen human nature. We confess to a fellow-feeling with him, and rather think we should have slyly written the same name on a shell ourselves, had we been there. Mr. Bancroft, by his injudicious zeal for making Washington, not simply the chief, but the only actor on the Revolutionary scene, besides bringing about his ears a swarm of grandsons and great-grandsons and nephews and grand-nephews of the men whose merits Washington would have been the last to deprecate, has actually made his hero ridiculous and a bore in the eyes of common readers. We fear that too many of the lieges sympathize with a very eminent gentleman, who shall be nameless, who was overheard to say to a friend over the breakfast-table at "Parker's," one day, "I say, don't you hate Washington?" And we are sure that the crop of *grivois* stories about him which have sprung up so rankly of late years has been forced by the unwise attempts of injudicious admirers to apotheothize him.

The life of John Adams as told by himself in his Diary as far as it goes, and by his grandson in connection with it and after it ceases, is particularly interesting as presenting the history of the Revolution from the civilian point of view. Historians have been so much given up to the military operations of that great movement, that we are apt to overlook the less striking but at least equally important part taken in it by the men out of uniform who raised the funds, conducted the correspondence, quieted the jealousies, adjusted the feuds, planned and carried out diplomatic relations with foreign powers, and, in short, did work without which the slow and long dubious successes in the field

would have had small results. Of all these things John Adams did his abundant share. And his Diary shows us the course of his laborious preparation for just these services, beginning and industriously continued long before he could have imagined the career which awaited him. Had he foreseen it and set himself deliberately to fit himself for it, he could scarcely have laid out for himself a course of reading and study more exactly adapted to his end. Through his whole course the traces of his early self-education are to be discerned. His Diary will always be most curious reading for the insight it gives, often unconsciously and unintentionally, of the first beginnings of the Revolution and of the signs and portents which went before it. We are introduced into the inner life of those times, and allowed to see the workings of the mind of a man, the representative of many besides, who is standing face to face with a duty beckoning to a path which may very probably conduct him to destruction, and all he loves to ruin, and who yet only waits to be assured that it has indeed a divine commission, to follow it without looking behind at what may come after. He deserves none the less credit for having chosen the more excellent way, because it conducted him to honors and power and fame; nor yet because he was but one of many who equally with himself put themselves and all they possessed upon what then seemed the cast of a very uncertain die. The gradual progress of the Revolutionary sentiment, before any but the most discerning spirits knew whither it must lead, is perhaps more clearly told in Mr. Adams's Diary than in any contemporary story. From the immortal argument of the Writs of Assistance, through the excitements of the Stamp Act, the successive taxations, the arrival of the British troops, the Boston Massacre, and the trial of Captain Preston and the soldiers, the action of the town and of the Legislature, the closing of the port, the suspension of the provincial government, and the assembling of the first Congress,— all the preliminaries and preparations for the Revolution can be there traced almost from day to day. We would say just here that Mr. Charles Francis Adams hardly does justice to his illustrious kinsman, Samuel Adams, in the note to the passage relating to the trial of Captain Preston, in which he says that, to ascribe to him the advice to Mr. Josiah Quincy, Jr., to engage in the defence, "in view of his known convictions respecting the soldiers, scarcely does him credit either as a friend or a citizen." This note was written before the publication of Mr. Wells's Life of Samuel Adams, and probably the sentiments of that great man were not so fully known as to this matter then as now. But it is now clear that there was no man in Boston so intensely interested in the soldiers having a fair trial, as a matter in which justice and the good name of

the town was deeply concerned, as Samuel Adams. It was unquestionably he, and not John Adams, whose advice helped to decide the course of the younger lawyer, and it was at his house that Mr. Quincy consented to act. Indeed, in 1770 no one would have supposed John Adams to have been intended by the absolute expression "an Adams," any more than any one would have thought anybody else to have been meant by it twenty years afterwards.

There is something very striking to the imagination in the varieties of life through which John Adams proceeded, though they came along so gradually, one after the other, that they almost seem like the due course of nature. His childhood spent in the obscurity of his humble Braintree home, his early struggles for independence, and his laborious industry inspired by no ignoble ambition, the part he took in the earliest movements of the Revolution, his removal to the continental centre of affairs, and his potential voice in their direction, his share in the Declaration of Independence, and in the nomination of Washington as Commander-in-Chief, and then his diplomatic years abroad, crowned by his name authenticating the Peace of 1783, and rounded by his representing his nation at the Court of George III., make up a series of fortunate vicissitudes not often matched in the lives of famous men. Though his residence in London as Minister to St. James was made uncomfortable to him and his family by the slights and petty affronts by which the king and court relieved the irritation caused by his presence and the mortifying events which had brought it about, still there must have been a secret satisfaction in the knowledge that such feelings existed springing from such a cause. The New England yeoman's son, whose life had been legally forfeit by his treason to the crown, standing in the circle at court, the representative of the victorious rebellion, must have been a Mordecai at the king's gate, but a Mordecai that must have been more or less than man if he had not privately enjoyed the annoyance his presence occasioned, considering the occasion of it. And it is an amusing thing for us to think of, if not entertaining to Mr. Adams at the time, how the special friends of America who had made St. Stephen's Chapel ring with her wrongs, and had fought their way to power as her ally, were taken aback by the apparition of a man who incarnated the very victory which had swept them into Downing Street, and how they, too, ventured only to show the coldest of their shoulders to him. Such is the difference in the way things look from one side of the House of Commons and from the other! Burke and Fox had doffed the blue coats and buff waistcoats which the Whigs had taken from our continental army as their party uniform (still surviving on the cover of the Edinburgh Review), and donned the bag wigs and

swords and court dresses which his Majesty's ministers then wore in Parliament, and the prosperous rebel looked very different in their eyes from the struggling one they had helped in their own political adversity. A cynic might indulge in some comments unfavorable to human nature on this text, but being the most amiable of critics, we shall do nothing of the kind.

It is a thousand pities that Mr. Adams's European Diary substantially ceases upon his arrival at London, and the gap is not materially filled up by the little of his private correspondence during the time of his residence there that appears in his Works. It were curious to know whether their speedy relegation to private life made any change in the demeanor of those eminent Whigs towards the American Minister. That he knew many distinguished persons we may be sure, whom we wish we could have heard him tell about. His accounts of his residence in France, as recorded at the time and more largely related in his later comments upon them, are so entertaining, that we regret the more to have lost the lively details of his English life which he might have given us. His diplomatic services in France were of the highest importance, though the cold shoulder was turned to him in Paris as well as in London. His eyes were not exposed to the glamour which did in a good degree blind those of his illustrious colleague Franklin to the designs of the French government, and it was not well-pleasing to the Count de Vergennes to be seen through by a diplomate from the Massachusetts Bay. He saw things with an undazzled eye, and was not mealy-mouthed in speaking of them. He was even clear-sighted enough to discern, through all the splendors of her dress and surroundings, that Marie Antoinette, in the height of her beauty, though a handsome woman in face and figure, was much inferior both in countenance and form to many beauties he had seen in France, England, and America. Having been a spectator of the shows of the courts of France and England, as well as of the more modest state of the Hague, having signed the treaty of 1783, which was the ultimate recognition of his country as one of the family of nations, having been the first to stand as her representative before her discarded monarch, Mr. Adams came home to finish his public life in her domestic service. It was on stormy times that that service fell, when the sky was dark and the sea ran high, and it required intuition to divine the true course, and a firm hand on the rudder to steer safe to port. And John Adams, when in command of the ship, had mutiny among his officers, to aggravate all the natural difficulties of his situation. All the greater and lesser infirmities of his temper and character helped his very virtues to make enemies of those of his own political household, and to prepare the way for his fall, if

fall it might be called, which was mainly occasioned by his courageous independence which saved his country, without compromising her dignity or honor, from a disastrous and perhaps a fatal war with France, at one of the most critical moments of her existence. This was the crowning act of his public life, the greatness of which is now admitted by all reflecting minds, though it was never forgiven by multitudes of his old Federal associates as long as he and they lived, and in some degree disturbed the tranquillity of his long retirement.

But that service, though great, was of comparatively a temporary character. The three acts of John Adams's life which have been of a permanent influence, and will be remembered as long as American history is read, are, first, his nomination of Washington as Commander-in-Chief; secondly, the part he took in the drafting and the adoption of the Declaration of Independence; and, thirdly, his substantial authorship of the Constitution of Massachusetts of 1780. It was a just pride with which he held up his hand and exclaimed, forty years afterwards, in reply to the inquiry of Josiah Quincy, "Who drafted the Constitution of Massachusetts?" "This right hand!" For that constitution, we believe it may be said with truth, was the most perfect form of a republican government ever made. Almost every deviation from its original provisions, certainly every one from any proposed by Adams, has been a blunder and a misfortune. It was our example which helped the other Colonies, just emancipated from the control of the mother country, in the attempts which they were making to find a substitute for what they had abolished. Had a brilliant visionary or an influential *doctrinaire* proposed some fanciful polity, resting on imaginary theories instead of the experience of mankind, in so leading a State as Massachusetts, the mischief might have been incalculable. That such were not impossible appears from the fact that even Poor Richard, the very incarnation of common sense, Dr. Franklin himself, favored the idea of a single legislative body, instead of the check on hasty legislation afforded by two. Happily, a statesmanlike mind, enriched with ample legal and historical learning, was called to the work, and the form he gave it not only endured unchanged for forty years, and still exists without vital alteration, but had a controlling influence over the final course of the other States, and upon the Constitution of the government of the United States itself.

On the 4th of March, 1801, he ended his long public life, and entered upon his quarter of a century of such repose as his active and restless spirit could enjoy. His long retirement, after so long a career of activity, has something about it that affects the imagination as the fit ending of such a life. He would not have been the man he was if it had not

been sometimes agitated by the passions of the past and the present, and disturbed by divers vexations and annoyances, which irritated his jealous spirit and sometimes led to angry ebullitions which were neither graceful nor dignified. These things, however, lose their relative importance as time flies on, and the idea that will rest in the general mind of the last years of John Adams will always be that of a philosophic statesman, watching the turmoil he had left behind him through the loopholes of his retreat, and beguiling the hours of his retirement with the recreations of literature and the pleasures of friendship and family affection. The successful career of his son John Quincy Adams was the supreme gratification of his old age, and his surviving to see him his successor at the head of the nation was the crowning happiness of his life ; while his death on the fiftieth anniversary of the signing of the Declaration of Independence was a conclusion of the whole matter as fortunate as it was extraordinary. John Adams was, in an eminent degree, foremost among the founders of our civil polity, and his history and his character will always be an interesting study to successive generations of his countrymen who owe so much to him.

Mr. Charles Francis Adams has therefore done wisely and well in publishing this popular edition of his life of his grandfather. We believe its sale already shows that the stupendous events of the last ten years, and the vastly broader stage on which they have been presented, have not entirely obscured the memory of the scenes and actors of the mighty drama of the Revolution. The glory of Gettysburg may for a season throw that of Saratoga into the shade, but Americans will yet remember that the one as well as the other was a cardinal battle on which the fate of the nation turned. The Proclamation of Emancipation may strike the contemporary imagination as something grander even than the Declaration of Independence ; but right reason will soon show that it was but its complement, without which that immortal instrument would have been a mockery, a delusion, and a snare, — “ a blurred and tattered parchment.” Mr. Adams, with a natural and laudable filial piety, regrets that his father could not have finished the work which he had begun, instead of leaving it to be completed by his son. We do not share in this regret. Mr. Charles Francis Adams's style is better adapted to such a narrative than that of his eminent father, which perhaps savors a little too much of the lamp, and bears too plainly the traces of that strenuous industry which was so characteristic an element in the composition of Mr. John Quincy Adams. And, besides, it is scarcely possible, considering the earnest temperament of that statesman, and his strong opinions which an unfriend might call prejudices, that he could have told the most stirring

portions of his father's history with the judicial fairness and impartiality which so honorably distinguishes this work. Its author deserves the thanks of us all for a valuable contribution to the popular stock of historical knowledge, as well as to the biographical literature of the language.

This work, however, has one great deficiency. It has no *Index*, nor even a full table of contents. As this is to be a book of permanent interest, we trust that the author will have so essential a want supplied in future editions. We think that a law should be passed making the publication of an historical or biographical work without an *Index* a misdemeanor, punishable by fine and imprisonment. With which truculent but wholesome suggestion we take our leave of the subject.

3.—*The Study of Government.* By GEORGE H. YEAMAN. Boston: Little, Brown, & Co. 8vo. 1871.

AMERICAN political education consists in the study of the Federal Constitution and a cursory view of political economy. We cannot admit that history, as at present taught, conduces in the least to a correct appreciation of political methods. When history is taught philosophically, and not picturesquely, the question will assume a different shape; but at present, the libraries of schools and universities are not full of books which throw such clear light upon the events of the past that we can afford to accept them at once as a record and as an explanation. The value of the study of political economy cannot be overestimated; the value of the study of the American Constitution depends entirely upon the method of instruction. If it is taught in a broad and elementary manner,* the result cannot but be good; if it is taught from a legal point of view, the result cannot but be bad. Cultivation of a political rather than a legal turn of mind is what is wanted. Interpretation and application of the Constitution involves, not questions of politics, but questions of the construction of a written instrument according to rules which, in so far as they resemble those applicable to wills and contracts, are of no more interest to the student of politics than to the student of any other moral science, and in so far as they differ from those rules, can only interest him as presenting a puzzling array of incongruities and absurdities. For example, the division of the powers of government into judicial, legislative, and executive is to the constitutional lawyer a finality; to the philosophical student of poli-

* As, for instance, in Mr. Furman Sheppard's text-book.

ties it is nothing of the kind. Such a student would be early taught that the executive has judicial and legislative functions ; the legislature, judicial and executive functions ; the judiciary, executive and legislative functions : that each department in practice performs multitudes of acts which, by theoretical construction, would belong to the others. The student of the Constitution is too often sent out into the world impressed with the idea that of such distinctions as these no less can be said than that their seat is the bosom of God.

It is to be noticed, too, that what is at least one of the most valuable parts of political education is, for reasons into which it is not necessary to enter here, now almost entirely beyond the reach of the cultivated classes in America,—we mean that instruction which comes of practical acquaintance with political affairs through the exercise of political functions. Our readers will hardly hesitate to admit that those classes have every year less and less share in the administration of the government of the country. If they are ever to regain the control so lamentably lost, it will be through a careful study of the conditions of political life. If the reign of demagogues is ever to cease and intelligence to resume her sway, it will be through science, and not through that blind faith in the excellence of our institutions which a wicked jealousy of other nations induces us to mistake for patriotism. The case was very different at the time of the formation of the American government. Then the political classes were the intelligent classes, and it is not an immaterial fact that, if we examine the books produced in this country relating to political subjects, we find that the *Federalist* remains to the present day the best handbook of the political art for Americans. Written by men of the widest experience and the greatest practical sagacity, it is replete with wisdom stanch enough to stand the severest of all tests, that of time. Tocqueville's *Democracy* is robbed of half its value by the taint of abstract and metaphysical speculations which pervades it. An able writer has pointed out in the pages of this Review, that his work is so much occupied with deductions from the "principle of equality," that he continually fails to take into account the numerous other influences which are at work. The student should be taught to approach with great caution the writings of an author who considers it proper in a political treatise to undertake such extraordinary tasks as that of showing "what causes democratic nations to incline towards pantheism," and "how equality suggests to the Americans the idea of the indefinite perfectibility of man."

Since Tocqueville, no book of any moment has appeared in America, and not more than one or two in England, dealing with questions of politics in a broad manner. Such contributions to political science

as have made their way into print are to be found scattered through the pages of magazines and newspapers. The quality of most of them induces the hope that they may never be preserved in a more permanent form. For a long time we have been content to find the staple of our political literature in glib declarations of natural rights and the meaningless resolutions of party caucuses. For more than a generation the true methods of political observation and study have been falling into greater and greater contempt, until it is no exaggeration to say that crazy speculation passes for genuine knowledge, and the dreams of fools are taken for the revelations of angels.

Statements so general as these cannot be demonstrated mathematically, but we can easily show by one or two illustrations what we mean when we speak of the decay of the political art.

Among the many political aphorisms which wisdom and experience have at various times given to the world, none is truer nor more universally admitted by those who have given the matter any attention than the saying of Burke, that no government can rest upon the heroic virtues. He might have added, that government is instituted for the purpose of dispensing with the necessity for the heroic virtues. It is not government, but anarchy, which sustains its life upon them. Revolutions are sustained by that very heroism which in ordinary times furnishes society insufficient support. To overturn a government requires enthusiasts,—in other words, heroes,—men who are capable of sacrificing to an ideal good the substantial advantages of life; men to whom self is nothing, to whom wife, children, the ordinary ambitions and prizes of the world, are forgotten things. Animated by such self-forgetfulness, not merely individuals, but whole armies of martyrs, have nobly endured torture and death. But virtue like this is not seen in activity except at rare intervals, while an orderly government must rest on perennial, not occasional, qualities. The only motives upon which an orderly government can count are the motives furnished by such modest desires as the love of property, the love of law, the love of wife, family, and reputation. Any system which needs for its support the higher and rarer motives of action will be sure to fail. This is but a corollary of the ancient rule, that government must deal with human beings as it finds them. It does not find many of them heroes.

But, obvious as all this may seem, it is hardly going too far to say that one would most naturally infer, from the tenor of our political literature, that it was not only far from clear, but that it was wholly untrue, so persistently do those engaged in the work of political education ignore it. That clerical exhortations should abound in appeals to the virtues of heroism is right enough, since churches are rather established

for the purpose of teaching *la haute morale* than *la haute politique*; but it is hardly to be expected that the press should join forces with the church in a systematic assumption that good government demands of citizens an heroic life. Such a mistake, however, the press is continually making. Whenever it becomes painfully apparent that government is not what it should be, the editorial method is either to charge the defect to the vices of the party of which the editor is not a member, or else to a lack of heroism in the community. For example, when it became evident to most intelligent people in New York, as it did several years ago, that their influence at the primary meetings and the polls was gone, they ceased to go to the primary meetings and the polls. They had found themselves outvoted by a more ignorant and more influential majority; it was a waste of time to take part in meetings composed of the most unfit electors, herded together for the purpose of selecting the most unfit candidates. For this natural conduct they were warmly rebuked by the press; they were told that it was their duty to go to the primaries, their duty to vote at the polls, their duty to allow themselves to be nominated for office. If the selection of candidates was bad, it was because good men refused to be candidates; if the polls were controlled by the ignorant, it was because the intelligent neglected their duties. These exhortations have produced, up to the present time, no effect. Every year the intelligent and honest classes take less and less interest in politics; every year the denunciations of their neglect grows more and more tremendous. How long our editorial zealots will continue their scathing diatribes remains to be seen. It never seems to have occurred to them that if frequent elections, extension of the suffrage, and the vast increase of popular offices have so changed the character of political life that acts which were originally, in a simpler state of society, prompted by the ordinary motives of self-interest, are prompted now only by the loftiest morality, the remedy lies, not in a quixotic attempt to sting the public conscience into an abnormal activity, but in such a change of system as shall give honesty and intelligence their due weight in political life. If they had been as thoughtful as they were patriotic, they might have read the lesson of the hour in the fate of one of the victims of their misguiding advice,—a gentleman who found by practical experience that the rewards of political knight-errantry in a modern American city were rather to be looked for in a speedy admission to the joys of a future life, than in any consciousness of having served his surviving fellow-citizens. Do these Catos of the press really imagine that they can induce any large numbers of their compatriots to enter the political arena on the terms which were granted Mr. Pullman? If what New

York needs is heroism, it will undoubtedly find its heroes, but it will find them in the tumult of a revolution.

In other instances also has the call upon heroism to furnish virtues for the support of the common weal signally failed. We do not recollect any more striking case than that of "absenteeism." American absentees, as we understand it, are of two classes,—those who, having taken a mean advantage of American institutions to accumulate a fortune, hasten to Europe to spend it; and those who, though living in one community, as, for example, Massachusetts or New York or Pennsylvania, wickedly employ their capital in other States, instigated thereto by the Devil and their own evil desires for a higher rate of interest. Who that is familiar with his daily paper does not remember the scathing rebukes administered at one time and another to these wicked men? People ought not to go to Europe to enjoy themselves; they ought to stay at home and go to their ward meetings and their district and county conventions. In the earlier and purer days of the Republic, it never was the custom for our best men and women to spend their summers on Swiss mountains and their winters in Italian galleries. The Declaration of Independence was not improvised in a gondola; the American Constitution was not conceived in the *coupé* of a diligence. Washington and Madison and Hamilton had other work to do than that of collecting pictures and hearing music. The true rejuvenating elixir of political life was the return of the travelling public from Europe to domestic duties.

And again, who does not remember the urgent appeals of the Boston press to the young men of Massachusetts to come forward and revive her decaying European commerce, and the denunciations of the men who were employing their capital in building profitable railroads in Nebraska, instead of maintaining unprofitable lines of steamships on the Atlantic? Heroism was found, as usual, unequal to the occasion. People were willing to die for their country, but no appeals to patriotism could induce them to undertake the task of bringing the products of the West to deep water for her. If the politicians of Massachusetts really suppose that capital will engage in unprofitable industries for the sake of patriotism, or that the well-being of a community can be fostered by such appeals, they furnish a very amusing instance of a very common delusion. But there is no need of accumulating instances. We have dwelt chiefly on the folly of the press, because the decay of the science of government elsewhere is generally taken for granted. That our legislatures and our executive officers are drawn from a very different class in society from that which used to supply them is not generally disputed; nor is it commonly supposed that our laws are well

made or well administered. But there exists a mysterious belief that in some unexplained manner, either through the press or the general virtue of the people, all these faults are corrected, so that the result is admirable, however singular the means. We do not believe that the result is admirable, or that the vices of a bad government can be cured in any way but by instituting a better one. The idea that we can rely on the press as a savior is for many reasons preposterous. The ultimate good to which we should direct all our efforts is political education, and our one object in calling attention to the Stygian darkness which prevails as to the true methods of political science is to attract the notice of the public, if possible, to the service done them by all serious writers on these subjects. The defects of Mr. Yeaman's book are neither few nor unimportant; but it is impossible not to sympathize with the aims of the author. Undoubtedly politics might be better taught by skilful teachers from other books, and the volume is not systematic or thorough enough to serve as a handbook. But it contains a good many valuable suggestions, and it is no small thing to know that there is at least one American writer on government who understands that the political art is a branch of science, and does not exclusively concern itself with the control of a majority of votes.

As we object to Mr. Yeaman's want of thoroughness, it is incumbent upon us to explain what we mean. The third chapter of his book is occupied with the discussion of "the object and province of government," and we could hardly select a topic which would be more likely to exhibit a political writer's strength or weakness. At the conclusion of the chapter we find the following sentences: "It results from the foregoing views that the only first foundation and the only safe guide for the science of politics is the purely moral science of ethics; the rights and duties of man as man; as a free, an equal, a moral, a responsible, a reasoning, an independent being, before the traditions and the artificial political contrivances based on force have made one man larger and another man smaller than the natural pattern of a man." This is either wholly unintelligible or wholly wrong. Ethics is the science of morality, and concerns the rights and duties of the individual. Politics concerns society at large, and a vast number of its most important questions have no more to do with ethics than with mathematics. What can ethics tell the world about the province of government, about sumptuary laws, about protective or prohibitory laws? A sumptuary law might treat man as "a free, an equal, a moral, a responsible, a reasoning and independent being," and ethics would be in vain called upon to furnish a guide for its adoption or rejection. Of course ethical questions become involved with those of politics; but how ethics can be

considered as the foundation and guide for politics we cannot understand. If Mr. Yeaman means that a man, to properly study political questions, ought to be endowed with a conscience, he is unquestionably right, and we strongly suspect that this is the only meaning which can be extracted from the sentence. As to the latter branch of it, what is the "natural pattern" of a man? Mr. Yeaman surely does not mean that the differences in the physical stature of mankind are solely due to their traditions and their artificial political contrivances. The book is full of such passages as this. For example, the first chapter, which deals with definitions of government and law, is very bad; it certainly ought never to have been written by a student of Austin. But, as we before said, we have no desire to rivet the attention of the reader upon Mr. Yeaman's deficiencies. His book shows an honest and intelligent mind. We trust that it may prove the herald of what its title signifies, for it is indeed time to return to the study of government. Little will it avail our descendants to know that their fathers extended liberty and vindicated the unity of their country, if at the same time they learn that these gains were made at the expense of their subjection to the tyrannous misrule of ignorance. If we would not present to the world the melancholy spectacle of a people too ingenuous for government, too subtle for law, and too liberal for anything save anarchy, by all means let us return to the study of government. There are indications enough that we have neglected it. At the North, the capital of the country abandoned to corruption and intrigue, and our principal city under the control of a triumvirate of thieves; at the South, violence and rebellion stalking over the country; strange and foul customs establishing themselves under the flimsy pretence of religious sanction on our Western border; our Eastern coast one vast port of entry for hordes of ignorant barbarians,—is it not time that we should turn from our shameless paeon of exultation over the superiority of America to all other countries, and confess in humility that even Americans may have still something to learn?

4.—*United States Geological Exploration of the Fortieth Parallel.*

By CLARENCE KING, Geologist in Charge.

Mining Industry, by JAMES D. HAGUE; with *Geological Contributions*, by CLARENCE KING. Submitted to the Chief of Engineers and published by Order of the Secretary of War under Authority of Congress. Illustrated by Thirty-seven Plates and accompanying Atlas. Washington: Government Printing Office. 4to. pp. 647. 1870.

THIS, as we are informed in a prefatory note, is the *third* volume in the series of the "Geological Exploration of the Fortieth Parallel,"

although the first in the order of publication ; first, because most generally interesting to the public, which looks first at questions of dollars and cents, and first, also, because, being something of a monograph in its character, it could be readily finished up at once, without waiting for the final results of the whole exploration. The other volumes of the series, four in number, are to be as follows : I., Systematic Geology ; II., Descriptive Geology ; IV., Zoölogy and Palæontology ; V., Botany.

The volume before us is a superb quarto, on heavy tinted paper, if anything rather too ponderous, while the illustrations, both those incorporated in the text and those of the *Atlas*, are extremely well and clearly engraved and printed in colors. The longitudinal and cross sections of the mines on the Comstock Lode, which are complicated and required much technical skill for their execution, are admirably done, and, indeed, are in no respect inferior to any work of the kind which has ever been published. These, as well as all the other illustrations, were engraved and printed under the superintendence of Mr. Julius Bien of New York, who deserves the hearty thanks of geologists and mining engineers for the pains he has taken to do the work in a satisfactory manner. In a book like this, so much depends on the care and precision with which the maps and sections are executed, that we cannot be too thankful that, as is most frequently the case in this country, the text has not been rendered almost useless by the worthlessness of the illustrations.

The "Survey of the Fortieth Parallel" was begun in 1867 and is still in progress, the work having now reached the meridian of Fort Bridger in its easterly advance from the western borders of Nevada. The belt of country surveyed, explored, and mapped, both topographically and geologically, is over a hundred miles broad in a north and south direction, and follows, somewhat irregularly, the course of the Central Pacific Railroad. The work was authorized by Congress, and placed under the general direction of the United States Engineer Corps, but with the express stipulation, on the part of Congress, that Mr. King should be the chief, he and all his corps being civilians. It is not necessary to investigate by what "happy accident" it was brought about that a work of such importance should be inaugurated, or how it came to be placed in charge of a competent person, and carried on uninterruptedly until important results had been attained. Previous to the Fortieth Parallel Survey there had never been any portion of the vast territory belonging to our government mapped with accuracy, except the fringe around our ocean border and the Great Lakes, which comes within the domain of the Coast and Lake Surveys. All the numerous expeditions to the Far West which preceded the one

directed by Mr. King had been of the nature of simple reconnaissances, interesting as giving the first rude outlines of the geography of previously unknown regions, but of no permanent value, since never based on any systematic triangulation, being only rough sketches taken on horse or mule back, checked by occasional astronomical determinations, and these usually made with the poorest of instruments and under circumstances the most unfavorable to precision. The collections in natural history made by all the earlier reconnaissances were valuable as furnishing material to be worked up by our zoologists and botanists at Washington and elsewhere; while the geological information obtained by these expeditions, and especially that which was carried on at such enormous expense, from 1852 to 1856, for the purpose of exploring a route for the Pacific Railroad, was almost worthless, partly on account of the ignorance and inexperience of the persons employed in that department, and partly because the country was traversed with such rapidity that no maps could be prepared on which to lay down the geological observations with an approach to accuracy.

In the work directed by Mr. King, on the other hand, a careful and accurate triangulation has been extended over the whole area surveyed, while the topography has been elaborated with a minuteness of detail which will not only give to the chartographic work of the survey a permanent value as furnishing the first trustworthy representation of the geography of a highly important portion of our vast territory, but which will also give some meaning to the geological results, which, if not based on accurate geography, are, in fact, almost worthless.

The completion of the topographical maps now in the engraver's hands, and the issuing of them and of the corresponding volumes of text, geological and other, will undoubtedly afford us an opportunity for further remarks in this direction; at present we have to do with a volume of "Mining Industry," one in which topography and general geology play quite a subordinate part.

This volume is, indeed, almost a monograph of the "Comstock Lode," more than three fifths of it being devoted to the geology, exploitation, and metallurgic treatment of the ores of that celebrated mineral vein. The remainder of the volume is chiefly occupied by a discussion of some of the other important mining districts in Central and Eastern Nevada, especially those of Reese River and White Pine. In a special chapter the coal basin of Green River in Wyoming is described, and a review of the mining interests of Colorado forms the conclusion of the volume. The chapters on the geological structure of the Comstock Lode and the Green River Coal Basin are by Mr. King; the remainder of the work is by Mr. James D. Hague, with the exception of a chapter on

the chemistry of the method of amalgamation in pans, commonly known as the Washoe process, by Mr. Arnold Hague, and shorter contributions in regard to some of the less important districts in Eastern Nevada by the last-named gentleman and by Mr. S. F. Emmons.

It is hardly possible for us at this distance, in miles and time, to understand what an important event was the discovery, in 1859, of the Comstock Lode, at a point not far east of the boundary of California, in what is now known as the State of Nevada, but which at that time was to white men only a nameless portion of the Great Basin. It was then roamed over by a few Indians of the Pah-Ute tribe, who got a scanty living from grasshoppers and the seeds of the nut pine (the one-leaved, or Fremont's pine). These pines and a few junipers sparsely distributed along the crests of the ranges formed the only arboreal vegetation of the region, which was called by the Pah-Utes "Washoe"; and by this name the whole country about the Comstock Lode was, and is still, known to Californians. Instead of retaining the name of Washoe and using it to designate the State of silver-mines, the legislature stupidly rejected it and adopted that of Nevada (snowy), which is in every respect inapplicable to a region of sand and sage-brush. Besides, as there was already a county and a town in California of that name, the confusion arising from this reduplication is endless.

The discovery of the Comstock Lode took place just at the time when the placer mines of California had become pretty thoroughly exhausted, when confidence in quartz-mining was sorely shaken by repeated failures, with only a few successes to balance them, when the Pacific Railroad was beginning to be seriously talked of, while nobody could see how a line of railway could be built and supported across the interminable, uninhabited, hideous region of the Great Basin. Just as the picking up of a nugget of gold at Sutter's Mill in California turned an overwhelming tide of emigration to the Pacific coast, so the discovery of some black-looking, heavy fragments of stone in Comstock's rocker, which soon afterwards were recognized as rich silver ore, opened the Great Basin to settlement, led to innumerable other discoveries, and these to a feverish, or even furious, spasm of speculative excitement, during which roads and stage lines traversed the region in every direction, while mining camps, towns, and even cities shot up like mushrooms, where it had seemed before that no inducement could be found for the emigrant to tarry one moment longer than was absolutely necessary. Discovery succeeded discovery, until, within three or four years after the Comstock Lode was opened, there was a line of mining settlements extending all the way from the California line to Great Salt Lake. What easier now than for the Pacific Railroad to

thread its way through these? Even the local trade alone demanded railroad facilities; and what gold has done for steam communication by water and across the Isthmus, that silver was now to do for direct transit, "all rail," across the continent.

Among all the interesting new occurrences of metallic ores and minerals which the explorations of the past ten years have revealed within the limits of the Great Basin, there is none so remarkable as the Comstock Lode, whether we consider it from the point of view of its commercial importance or from that of its scientific interest. Indeed, it is doubtful if any one vein ever yielded so large returns within so short a period. Over a hundred millions of dollars have been extracted from it in the ten years since it began to be worked, and this sum is almost half as much as the Veta Madre of Guanaxuato, the typical mother vein of the world, yielded during sixty-three of its most productive years. It is more than the entire yield of the Freiberg mines during the whole time for which records have been kept, or for nearly three hundred and fifty years.

This productiveness is due in part to the enormous size and richness of the vein, but also, in part, to the immense activity displayed in getting possession of its hidden treasures by the companies into whose hands it has passed. The machinery by which the various mines are drained and the ore raised to the surface is ponderous, costly, and much of it admirably well contrived. The contrivances employed in separating the precious metals from the rocky gangue in which they and their ores are disseminated, and the processes used for extracting them from their combination with the sulphur and other mineralizing substances with which they are chemically combined, are in many respects peculiar, and have been carefully studied and described in this volume, by Messrs. J. D. and A. Hague. To enter into any detail with regard to them in this place would hardly be suitable. The volume will be a standard book of reference for all mining engineers and metallurgists who wish to know what of importance has been done in their departments.

The general public will be chiefly interested to learn how productive this great lode now is, and what the prospects of its future may be. Does it now yield at the rate of sixteen millions a year; if not, why not; and will it ever do so again? These are questions replete with interest, and they have been brought prominently before the people by the persistent efforts of a person named Sutro, to make it appear that it is a matter of national importance that a deep adit-level, or "tunnel," as such excavations are, in sheer disregard of previous good usage, getting more and more to be called, should be run to work the

Comstock Lode to great depths. For this purpose the loan of the credit of the United States, to the extent of several millions, has been asked, on the ground that the productiveness of the lode will be so greatly increased by the proposed deep working, that the government will be the gainer, since this increase will be so enormous that the value of the precious metals will be rapidly accelerated in its fall, and the amount of our national debt thus be indirectly decreased.

Three questions, therefore, come up in this connection: *First*, Will the value of the lode, at great depth, be best proved by an adit-level or by the shafts which are now sinking upon it? *Second*, Is the lode likely to prove in depth of anything like the same value and richness which it has now or formerly had? And *third*, If proven to hold its richness at great depths, will it be most economically worked by means of the proposed deep adit, or tunnel, rather than by means of shafts, or will this adit be a necessary auxiliary to the shafts?

It is evident that if the second of these questions can be answered at once in the negative, then the others need not be answered at all. If in the affirmative, then the first question needs to be settled; that is, if the vein is not certain to hold its richness in depth, then the question whether it will, or not, is one which can only be determined by actual working, or by laying the ground open to inspection; and, if this can only be done by a deep level, then the question would be one of probabilities; or is it sufficiently probable that the vein will hold its richness at depth to make it worth while that the expense of driving a deep level should be incurred? If, on the other hand, the character of the vein at depth can be as well ascertained by the shafts which are now sinking, then running the tunnel as an exploring work would be an entirely unnecessary expense. The third question, then, whether the vein could best be worked through the deep adit or by means of shafts, need not necessarily be answered until after it has been settled that it will be worth working at all.

From an examination of the work of Messrs. King and Hague, with special reference to the question of the "Sutro Tunnel," as the projective deep adit is generally called, the data are obtained without difficulty for answering the questions suggested above. In the first place it is clearly seen that the lode is rapidly diminishing in width, the two outside walls between which the ore channel is enclosed everywhere converging in depth. Indeed, it appears that the productiveness of the lode is already seriously diminished; so much so, that the bullion product of 1869 was less than half the annual average from 1860 to 1867. More than this, almost the whole of the present yield is obtained from the old ground near the surface, by taking out low-grade ores, which

can now be worked with profit, owing to the increased facilities furnished by railroads and other improvements. As Mr. Hague remarks, "the deeper explorations of those mines which furnished large products from ground within five hundred or six hundred feet of the surface, such as the Ophir, Gould and Curry, Chollar-Potosi, Empire, and Imperial, have thus far afforded little or no encouragement." This being the case, it would seem that the answer to the second question suggested above will almost certainly have to be in the negative, and that it must be admitted that the lode does not hold out in depth with anything like the same richness which it had near the surface, and that it is not likely to regain, much less surpass, its former yield. Still, so remarkable a lode should be explored in depth, no matter how unfavorable the conditions may now appear to be, since no one can say positively that these conditions may not change for the better at some points, and that there may not be portions of the lode capable of being worked to great depth with profit. Shall this exploration be done by means of the shafts now being sunk on the lode by various companies at work on it, or by one deep adit driven by another and a distinct company, at a cost so great, it is claimed, that the assistance of the national government, to the amount of several millions, must be had? To this question Mr. Hague furnishes the following answer: "The demand for, or usefulness of, the tunnel depends entirely on the value of the lode in depth; and the question now pending as to this value is likely to be answered sooner, more fully, and at less cost by the several deep shafts, which are now being sunk from the surface downward, than it can be by any other means." (p. 166.) That this statement would entirely accord with the views of all skilful and disinterested mining geologists we have no doubt.

In view of the above facts, is it not a remarkable illustration of the way things are managed at Washington, that a commission has been authorized by Congress to inquire into the feasibility and desirability of the Sutro Tunnel, and that this commission does not include among its three members a single mining engineer or geologist? Two of them are military engineers, and the third a medical man, although the resolution of Congress authorizing the Commission especially required the President to appoint as this third man a mining engineer or geologist. Thus it appears that, to pass an opinion on a matter which may affect the public purse to the extent of several millions, and which at all events opens questions for discussion in mining geology of the greatest practical and scientific importance, three persons are called in who are in no respect qualified, either by experience or education, to meddle with such subjects. And yet it would be admitted by all who are com-

petent to form an opinion in such matters, that there could be no investigation undertaken for which special training and knowledge were more required than this very one. It is a shame that political influences should have been allowed to thus override both Congress and common sense. The odor of San Domingo which hangs about this appointment is apparent.

To return, however, to the work from which we were led into this digression on a subject which happens just at this time to be of special practical importance. It may safely be said that the volume is in all respects a trustworthy and creditable one, and well worthy to be placed by the side of that other admirable engineer paper, the report of Messrs. Humphreys and Abbot on the Physics and Hydraulics of the Mississippi River. It may confidently be anticipated that the other volumes of the series will form a very important addition to the scientific literature of the world. We cannot but hope that the day of crude reconnaissances and helter-skelter geological work, under government auspices, is nearly past, and that the example of thoroughness set by Mr. King, under the superintendence of the Engineer Bureau, may be imitated in some of the other departments at Washington.

5.—*Diary of the Besieged Resident in Paris.* Reprinted from the “Daily News,” with several new Letters and Preface. London: Hurst and Blackett. 1871.

ON the 19th of September, 1870, Paris was invested; on the 28th of January, 1871, it surrendered. The history of this period of four months has been given to the world by many correspondents of many newspapers, but no account has attained the same notoriety as the “Diary of the Besieged Resident.” Few of these letters had made their appearance in the “Daily News,” before it was currently reported that their author was Mr. Henry Labouchère, of whose previous literary efforts nothing was known, except the fact that he had contributed one or two letters to the newspaper of which he was a joint proprietor. No one, however, can read the volume before us, and fail to be struck by the excellent style in which it is written. The sentences are admirably composed, the English terse and clear, the narrative easy and connected, while the humor which runs throughout the whole of it gives to it a special interest. What its value will be to the Gibbon or Froude of the next century we will not venture to say; but amidst the many contradictory and voluminous works through which he will have to wade, here at least he will find some repose from his labors. In other

accounts of the siege, the progress of the war, the civic conflicts, the apathy of the population, may constitute the *raison d'être* of the book, but in this case the interest is altogether a subjective one, namely, the influence exercised upon an individual mind by what is taking place around. One would imagine that the Besieged Resident had been in the habit of attending sieges *en amateur*; there is no pathos, no attempt at fine writing about a national struggle or a national collapse, and no hurry perceptible in the expression of his opinions. A game of skill is going on before his eyes, in which the skill it is true is all on one side, and he sums up at intervals the length of time which will probably elapse before the moment of checkmate arrives. To the uninitiated it might seem easy to write letters under such circumstances which should be full of interest and of novelty. Those, however, upon whom the task devolved were painfully aware of the difficulties in their way. News became scarcer than food. Did a sparrow fall to the ground, there were fifty correspondents ready to welcome its fall, each prepared to claim it as a special contribution for the letter of the day, round which all other topics might be grouped. Firing in the distance may be exciting at first, but it does not seem to have any effect in stimulating the intellectual powers. A member of the diplomatic service, who has lately returned from spending the week of the 17th of April in Paris, brought back with him no information beyond the intelligence that the breakfasts were excellent as of old, and the reports of the cannon quite audible. He had not even taken the trouble to form an erroneous view of the situation. From the outset of the siege but little doubt of the probable result is expressed by the Besieged Resident, and the events of each successive week only confirm him in his original estimate. On the 20th of September he asks: "How is it all to end? In a given time the Parisians will eat themselves out and fire themselves out." The episodes of the siege are already beginning; a speculator rushes in and says, "Célestine has burst." "To my horror I discovered that he was speaking of the balloon." Ernestine however remained, and to her the letter was confided. Meanwhile Paris *sibi plaudit ipsa domi*, rants, boasts, lies, believes all things, hopes all things. It is impossible that the civilized world should patiently submit to such a spectacle without an effective protest; the protest is made, but it does not happen to be an effective one. Every conceivable report is circulated, and each in its turn is believed; now Prince Frederick Charles is killed, now the English government has been turned out of office owing to its want of sympathy with Paris, now Bazaine has broken out of Metz. Yet on the 1st of October, two sorties have been driven back, and the price of a goose has already reached twenty francs. "How

can all this end? In a given time provisions and ammunition will be exhausted, and a capitulation must ensue." This however was by no means the view of many of the best informed English journals, and even to the end of the year the "Spectator" believed in the recuperative energies of France, in the genius of Chanzy, and the ultimate defeat of the invading armies.

An absolute monotony is the prevailing feature with regard to the operations in Paris, and the Besieged Resident becomes by far the most interesting and prominent point in his journal of the siege. The state of his finances and his personal appearance present peculiar difficulties. On ordering a suit of clothes he chooses a tailor with a German name, feeling convinced that he will not ask for payment under the present circumstances, and "if he does, he will not get it." Such is the scarcity of fresh meat on the 8th of October, that he is entreated by a lady, "who was walking along with a parcel under her shawl, to drive away six dogs who were following her." She "had two pounds of mutton in her parcel," and the dogs declined to go. Surely the Besieged Resident must have been reading "Rabelais" during the morning, which would easily account for this paraphrase of a story, which could hardly be reproduced in its original form.

As a specimen of the spirit in which the book is written, we quote an account of a visit, on the 13th of October, to the Faubourg St. Germain: "In this solemn abode of a fossil aristocracy I have a relative, a countess. She is, I believe, my cousin about sixteen times removed; but as she is the only person of rank with whom my family can claim the most distant relationship, we stick to the cousinship, and send her every year cheap presents, which she reciprocates with still more meretricious *bon-bons*. 'Are you come to congratulate us?' said my cousin, as I entered. I kissed her hand. 'What!' she continued, 'have you not heard of the victory?' I opened my eyes. . . . 'Surely,' added my cousin, 'you must have heard the cannon. Ah! you English are all the same; you are all Prussians, your Queen, your Times, and all of you.' 'We are sacrificing our lives,' said the mild young man. I looked at him, and I greatly fear that I smiled. 'That is to say,' he continued, 'we are prepared to sacrifice them.' 'Monsieur is in the Garde Nationale?' I asked. 'Monsieur is the only son of a widow,' put in my cousin. 'But I mean to go to the ramparts for all that,' added the orphan. 'You owe yourself to your mother,' said the priest. 'And to your country,' I suggested, but the observation fell very flat. 'It is a grand sight,' observed one old gentleman, as he put a third lump of sugar in his tea and another into his pocket, 'a glorious spectacle, to see a population that was supposed to be given up to luxury, subsisting cheerfully, week after week, upon the simplest necessities of existence.'"

On the last day of October Paris learnt the fall of Metz, and on the following day occurred the abortive attempts to establish the Commune. The partial success at Bourget had been converted into a retreat, while pacts with death were as common as the fulfilments of them were rare. "People who mean to die do not sign a preliminary round-robin to do so." By the middle of November "cats are exceedingly wild," and rats an ordinary item of the *menu*. On the 5th of December a rat costs one franc; if fat from the drains, one franc fifty centimes. On the 21st the classics are doubtless proportionably expensive, or we feel certain that the Besieged Resident would otherwise never have represented the National Guards as deriving any pleasure from toying with the tangles of *Nereus' hair*. Christmas is properly celebrated, notwithstanding the dearth of provisions. "My friend's servant opened a closet in which sat a huge cat. 'I am fattening her up for Christmas day; we mean to serve her up surrounded with mice, like sausages,' he observed." Nothing, however, in the whole account, is so graphic and humorous as a personal description of the author during the last days of the year. It is said that his complaints of poverty drew forth supplicatory letters to the editor of the "Daily News," entreating him "not to let the Besieged Resident starve." What can be better than the following passage? "Then my clothes,—I am seedy, very seedy. When I call upon a friend, the porter eyes me distrustfully. In the streets, the beggars never ask me for alms; on the contrary, they eye me suspiciously when I approach them, as a possible competitor. The other day I had some newspapers in my hand, an old gentleman took one from me and paid me for it. I had read it, so I pocketed the halfpence. My upper man resembles that of a dog-stealer, my lower man that of a bishop. My buttons are turning my hair gray. When I had more than one change of raiment, these appendages remained in their places; now they drop off as though I were a moulting fowl. I have to pin myself together elaborately; and whenever I want to get anything out of my pocket, I have elaborately to unpin myself, with the dread of falling to pieces before my eyes."

This may not be history, but it is very pleasant writing, and after Claretie, or Sarcy, or even George Sand, it is a relief.

In January came the bombardment, and the Besieged Resident expresses somewhat realistic views upon the relative value of himself and of objects of art, and "would rather that every statue and every plank in the world were smashed to atoms by shells than that he were." The last three weeks of the siege furnish the same record of fresh illusions indulged in, only to be still more rudely dispelled, of a few faint struggles engaged in, only to prove as unavailing and hopeless as those of

the preceding months. What George Sand said in her *Journal d'un Voyageur* of the camp of Nevers might, with equal justice, have been predicated concerning all other chances of succor or means of aid. "It had but one defect, namely, that it did not exist." The estimate formed by the Besieged Resident of the male population of Paris is not a high one. "It has done little more than bluster and drink and brag." And when the inevitable capitulation came, it quietly succumbed. It was not, however, until the 9th of February that the Besieged Resident left Paris, to be "restored to the society of his relatives, who," he tells us, "are honest, but humble." We have said enough to show that his book is full of pleasant writing, while the light thrown upon the character of Trochu gives it a real value. The most severe of critics would be obliged to own that *se non è vero, è ben trovato*.

6.— *Second Report of the Massachusetts State Board of Health.*
1870—1871.

THERE has lately been published by the Massachusetts State Board of Health a volume of the greatest interest and importance to every citizen of the Commonwealth. This commission is composed of seven gentlemen, five of whom are business men of distinguished energy and public spirit, and the remaining two are eminent medical men of Boston. These gentlemen have for several years made a special study of the causes of disease in this State, and especially of such causes as are constantly exerting their deleterious influence in its cities and towns.

They have spared no effort to discover which among these various causes are preventable, and what are the surest means of effecting such prevention when possible.

In the volume before us, their annual report, for which the public is mainly indebted to the untiring zeal and efficiency of the secretary, Dr. George Derby, they have set forth the result of their investigations in the most graphic and powerful manner. Not only to the professional reader, but especially to every parent, and, indeed, to every man and woman who has any interest in the welfare of their families, friends, and fellow-citizens, this book is not only entertaining, but of infinite value. Full and reliable information is given regarding the prevalence of different diseases in the various parts of the State, with the most able consideration of their causes, and the means of controlling or eradicating the same. The influence of situation, soil, and drainage, that of food and drink, and the method of water supply, are ably discussed. The effects of various manufactures and occupations, and of

the use of alcoholic stimulation, are treated of with great care, not upon theoretical grounds, but with conclusions based upon facts collected with diligence and discrimination. There is special and minute consideration of the more urgent dangers to which every increasing community is annually more exposed. Conspicuous among the latter is the irresponsible and frequently infamous manner in which food, especially fresh meat and milk, is selected, prepared, and furnished to the public. Recent developments regarding the slaughtering of cattle at Brighton, and the subsequent preparation and final sale in market, of beef so diseased that the slaughterers sickened and died from inoculation, show how entirely we are at the mercy of the avarice or neglect of the dealers, and how well founded is the appeal of the Health Board that some system of public inspection, and restriction regarding animals slain for food, be adopted. The very fact that the effect of consumption of diseased meat does not take the form of a definite disease only renders the danger greater, in so far as its detection is the more difficult, and, from this circumstance, families, neighborhoods, or indeed whole communities may become infected, and yet the supply and consumption remain of the same character. This applies with especial force to children, whose organizations, being more delicate, yield the more readily to such causes of deterioration, and whose nourishment is derived either directly from the mother, whose secretions have been tainted by unwholesome food, or from the milk of cows whose diseased condition is not shown in the milk itself, but no less surely carries the cause of deterioration into the system of the child, prevents its development, and renders it an easy victim to any ordinary attack of disease.

The difficulty of discrimination by the buyer is shown especially in the case of pork, whether fresh, or in the form of ham, bacon, or sausages. Any of these articles may present to the eye every evidence of excellent quality, and yet hold within their tissues those microscopic parasites which, when taken into the stomach and warmed into vitality, penetrate the intestinal walls, spread through the muscular system, and thence, with almost indefinite multiplication, pursue their work of destruction, until, after months of bodily suffering and mental depression, either death comes as a welcome deliverance, or a protracted convalescence slowly restores the victim of the neglect of well-known facts. Dr. Derby's admirable paper on the history of this disease, trichiniasis, in Massachusetts, closes with the statement of the well-attested fact, that thorough cooking destroys the infecting power of trichinous pork.

It is to the establishment and proper management of abattoirs that we must look for the correction of these evils, and we would earnestly

appeal to all citizens to support the board in their present efforts to achieve this reform. A few years since these evils were far more in New York than they are to-day in Boston. The abattoir system was proposed, but was resisted to the utmost by the butchers and cattle-dealers. The Health Board of that State, failing to convince these persons by reason, prohibited the continuance, after a certain date, of the private and irresponsible slaughter of animals for the market. At once the bureau was besieged by the cattle and meat dealers, full of anxious and plausible arguments, and protesting against an order the enforcement of which would, they said, bring a famine upon the city. The Health Board hardly feared that so rich a market as New York would want for meat, while the Jersey cattle-pens were only across the river, and communication with the West remained unimpeded. They stood by their order. The private slaughter-houses were closed. Then it appeared that their owners, foreseeing the inevitable result, had meantime formed companies, had established abattoirs in conformity with the regulations of the board, and they now continued the supply of meat not only with greater ease, but with greater profit, though with no higher prices than before. The change had been peaceably and permanently effected. In a large, airy, well-disciplined abattoir, fitted with appliances for the immediate utilization of refuse, under the management of a responsible company, and constantly open to police inspection, nuisances have no existence, and the possibility of diseased meat being offered in market is reduced to the minimum.

A portion of the report before us, which will be found especially entertaining to the general reader, is the communication of Dr. Bowditch, regarding the dwellings and methods of life among the more degraded and criminal classes in the city of Boston, the origin of disease, and deterioration of public health and morality in consequence of the surroundings and habits of these classes. He compares these conditions with similar ones of cause and effect in the city of London. While temporarily residing in the latter city during the past year he made a personal inspection of those districts where crime and squalor have for so many years found a home, and after his return made a similar inspection in Boston. The following is an extract from his narrative: —

“ . . . Stoop with us, and crawl cat-like down this dark cellar-way, and see a *home* in Boston! This cellar room is scarcely high enough for us to stand erect. One can easily almost touch each of the four sides while standing in the centre of it. The floor is dark, dirty, and broken; apparently wet also, possibly from the tide oozing up. Two women are there, commonly, yet rather tawdrily dressed, and doing nothing but apparently waiting, spider-like,

for some unlucky, erring insect to be caught in their dusty but strong meshes. Tubs, tables, bedclothes, and chinaware are huddled incongruously together. Our guide strikes a match by the stove, and then opens a door into a so-called bedroom. It is a *box* just large enough to hold a double bed. No window is in it, no means of ventilation, save through the common room up the cellar steps. The bed is of straw, covered only by a dirty blanket. Everywhere is the picture of loathsome filth. The stench, too, of the premises is horrible, owing to long-accumulated dirt, and from the belching up of effluvia from solutions of dark mud, reeking with sewage-water from the city drains and water-closets. It is difficult for us to breathe in the tainted atmosphere. We feel ourselves enveloped in a physical atmosphere most horrible, and a moral one most degraded. We glance into another 'bedroom!' opening by another door into this common room. It is a facsimile of its neighbor. Upon the dirty blanket lie recently washed and finely starched wrist-cuffs, and the jaunty modern hat and feather now worn by all. The strange contrast between fashionable neatness and exterior proprieties of appearance with extreme nastiness was never more strongly manifested. 'How much do you pay for these rooms?' we asked as we turned to leave. 'Four dollars a week!'

"I saw no worse home in Whitechapel. I even doubt whether any so bad can exist under English law. And this was not a solitary example. We visited several of the same type. If any faith can be put in the idea of an overruling, retribution-paying justice; if any confidence can be placed in all the deductions of modern sanitary science, Boston will some time suffer the heaviest of penalties for its great guilt in these matters. Nay, is it not even now suffering the direst of calamities in the deleterious influences exerted upon every child born within such dens?

"My indignation is excited to think that the city authorities allow even one such tenement to remain to taint the atmosphere, both physically and morally, of the whole neighborhood, especially when we have laws stringent enough to abate this and many more similar nuisances that are scattered here and there in Boston. More especially am I indignant to think that some of these houses are at times owned by men living in luxury, in our most fashionable places, men moving in political power, nay, men of irreproachable religious *appearances*, who talk of Christianity, and perhaps listen with becoming gravity to the beautiful teachings of the Sermon on the Mount, Sunday after Sunday. . . ."

It is a quite general belief that such conditions as are here described attach inevitably to great cities, and that, so long as they are kept within certain geographical bounds, the remainder of the population is not affected by them. This is a fatal mistake. Every medical man of experience and observation knows how constantly the miasm of fever and the exhalations from other diseases emanate from these sources, and are daily disseminated over the city, while every few years occurs an outbreak of epidemic, which has here found a congenial soil, and which reaches far into homes of fancied security for its victims.

Where lies the way out of these difficulties? To us these very pages seem to indicate it, namely, in the extension of the powers and duties of this Health Board, so that in another year they shall not only continue their work of investigation of the causes of disease, but shall also commence that of eradication. This is no impracticable scheme. It has been successfully tried in other parts of the country.

Six years ago the terrible news of the approach of cholera frightened the legislature of New York into the passage of a health bill, which led, among other things, to the enforcement of measures for the correction of the very abuses which the report before us most conspicuously calls attention to in Massachusetts.

When the determination to improve the dwellings of the poor and the vicious, and to ameliorate the condition of their inmates, was first expressed, it was at best smiled at as utopian. It was, however, firmly, persistently, and successfully carried out. It was found that the periodical cleansing of tenement-houses, the improvement in their means of light and ventilation, and the adequate provision for personal cleanliness and privacy, did reach the moral nature of the tenants, did stimulate their ambition, and did make them in every way more decent. This was due quite as much to improved and constant discipline as to improved construction. The most wisely and liberally constructed tenement-house may soon be ruined by the filth and wantonness of the tenants, if not looked after. The work is one of untiring diligence and frequent repetition, but it can be done. A tenement-house, once put in good condition, can be kept so, if only the owner or his agent inspects it frequently, say once a week, and compels each tenant, on pain of ejection, to keep his quarters clean. With a reasonable exercise of patience and encouragement, but a short time is required to establish the habit. The tenants soon learn that neglect on the part of one of their number reflects discredit and brings discomfort upon all, and join effectually in his condemnation; while each fresh inmate falls naturally, more or less, into the customs of the house.

Experience in New York proved beyond a doubt the truth of Dr. Bowditch's position, that the responsibility for the filth, disease, and degradation that is proverbial in tenement-houses lies at the door of the owners. The owners failing in their duty, the responsibility reverts to the public authorities, whose duty it is to enforce upon these owners the requirements of the tenement-house law. Unhappily, the municipal authorities have miserably failed.

Strangely enough, Massachusetts, so generally in the front rank of improvement, is most disgracefully in the rear as regards care for

the health of her citizens. To care for them when actually sick, her public treasury and her private purses are open with a lavish liberality; but to keep them well, to give to their children fresh air, a decent habitation, and a reasonable protection from disease, she somehow, by some strange obliquity, does not consider her duty. The constituted authorities, especially in her proudest city, have been most urgently appealed to by their own medical counsel, men in whose wisdom and integrity they had entire confidence, but they disregarded their appeals, and calmly saw them, mortified and disappointed, turn from their labors, which, sadly as it sounds, they had found utterly unavailing.

Self-preservation, no less than humanity, points to the State Board of Health as the only reliance under these circumstances. That they will display the same judgment and efficiency in removing that they have in detecting the causes of danger we have no doubt.

7.—*Curiosities of the Law Reporters.* By FRANKLIN FISKE HEARD.
Boston : Lee and Shepard. 1871.

THIS entertaining little book contains many of the stories which have amused successive generations of lawyers, traced to their sources. We know of no other such collection, for though Mr. Wallace has given some specimens of the quaint style of the old reporters, they are merely thrown in by the way; and some very modern cases cited by Mr. Heard are equally good. Witness the remark on Reid's case, the first in the book: "Reid and McGuire were both victims of the same accident, which, though melancholy, has settled the law." Some of the best known anecdotes, however, do not seem to be authenticated; for instance, the following, which is too good not to be true: "A searcher after something or other, running his eye down the index of a law book through letter B, arrived at the reference, 'Best, Mr. Justice, his great mind.' Desiring to be better acquainted with the particulars of this assertion, he turned to the page referred to and there found, to his entire satisfaction, 'Mr. Justice Best said he had a great mind to commit the witness for prevarication.'" This specimen of index-making is almost equalled by that in the last English edition of Smith's Leading Cases: "EAGLE'S EYES — Court will not always look with."

The book does not, of course, pretend to completeness, and there are some notable omissions. A curious case, not given by Mr. Heard, is that in which an ecclesiastical chancellor, Archbishop Morton, threatened a defendant with punishment in the next world, as the common

law could not reach him in this. The suit was against an executor who had released a debt due to the testator without the assent of his co-executor. It was argued that the law gave no remedy against such an act. "Chancellor. I know well that every law is, or of right ought to be, according to the law of God; and the law of God is, that an executor who is of evil disposition shall not expend all the property; and I know well that if he does so, and does not make amends, or is not willing to make restitution if it be in his power, he shall be damned in hell." (4 H. VII. 5 a.)

The English reports, however, seem on the whole to have been pretty thoroughly searched; but very little has been done for the American. We have, to be sure, Chief Justice Redfield's immortal comparison of a decision to "the sophistry of the ancient schoolmen, by which it was attempted to be proved, by syllogistic reasoning, that in a foot-race Hercules never could overtake the lobster"; but there is no reference to Wallace's Reports, which contain some curiosities the like of which never saw the light in any law book before. The report of the prize case of *The Bermuda*, 3 Wall. 514, is perhaps as prolix and irrelephant as anything ever printed, but is rather amusing. A complete list of passengers, crew, and cargo is given. "A few memoranda were found aboard; a part of one may serve for an illustration; from the perceptiveness with which harmonic colors are prescribed, and the dainty size and quality of the gloves, '6 $\frac{1}{2}$ best,' obviously a lady's." Then comes an invoice of kid gloves. The passenger list is also given in detail, and includes, in the reporter's words, "certain gentlemen perfectly well known in circles of gentility and pleasure both North and South; among these was the late amiable Mr. John Julius Pringle, a gentleman of education and fortune, resident at South Carolina during the winter, but at Newport, R. I., in summer, and in that agreeable resort of taste and fashion by many pleasingly and with regrets remembered." This style of reporting law points is so original as to merit at least a notice. So of the opinions of that eminent jurist, Mr. Justice Lumpkin of Georgia, whose reported decisions are wonderful indeed. Here are a few extracts from one which breathes the free American spirit, untrammelled by precedent, in most glowing periods. Thus does the most learned judge express his disapproval of the doctrine that a writ of error needs a seal (*Lowe v. Morris*, 13 Ga. 147):—

"I can scarcely suppress a smile, I will not say grimace irresistible, when I see so much importance attached to trifles. I scorn to be a 'cerf adscript' (*sic*) to things obsolete or thoroughly deserving to be so. . . . Pres. Pendleton states that there was a period when the impression [on a seal] was made with the eye-tooth, and thinks that there was some utility in the cus-

tom, since the tooth's impression was a man's own, and presented a test in case of forgery. But this reason does not hold true in this epoch of dentistry, when no man's tooth is his own. . . . I admit that old things may be good things, as old wine, old wives, ay, and an old world. But the world is older and consequently wiser now than it ever was before. . . . Let the legislative and judicial axe be laid to the root of the tree; cut it down, why cumbereth it any longer courts and contracts?"

We hope Mr. Heard will look more carefully into the American, and especially the Georgia reports, before publishing a second edition.

8.—*A Topographical and Historical Description of Boston.* By NATHANIEL B. SHURTEFF. Boston: Printed by Request of the City Council. 1871. 8vo. pp. 720.

THERE are books of topography and local history more amusing than this, but we should not know where to look for another so complete. Lord Macaulay has made us acquainted with the surroundings of London, as they were when woodcocks were shot on the site of Belgravia, and Montague House, the British Museum of these latter days, stood among pastures and cornfields. But Lord Macaulay never saw the muster-rolls of Hengist and Horsa; still less could he point out the spots on Ludgate Hill where stood the first shanties that stored the harvests of Kent for barter with Baltic iron. Virgil sang of the tame warblers that made the loneliness of the Tiber noisy when the keels of Æneas first ploughed up its yellow flood. But this was Virgil's imagination conjuring up the scene, not his knowledge depicting it. Dr. Shurtleff (no more a Virgil than a Macaulay) undertakes to narrate the primordial as well as the later story of a town, among the oldest of the New World, which has become a somewhat noted scene of commerce, wealth, and culture. He pretends to tell it with authentic details, from the time when William Blackstone lived alone, on Shawmut, by the generous spring now dry in Louisburg Square,—through the times when the English inhabitants who came next rejoiced in the facilities they found for fencing out the wolves and foxes from their folds and hen-roosts,—through the times when the obstinate townsmen were hunted by Quakers, and turned upon them savagely,—through the times when Boston deposed a king's governor, anticipating the news of the Revolution which put an end to the royal line of Stuart,—through the times when it blazed with bonfires for the fall of Louisburg and the conquest of Canada,—through the times of the Stamp Act riots, the destruction of the East India Company's tea, the *Mas-sacre* in State Street, and the battles of Concord and Bunker Hill.

He composes a primeval Directory, indicating who lived where, while neighborhoods were growing and bare spaces were filling up. He tells what important men were buried under what sods, from the day when the good emigrant son-in-law of the Puritan Earl of Lincoln was laid down to his sacred rest in the first Boston grave. He follows the fortunes of springs and wells with a tender zest that might seem caught from the writer of Genesis. He luxuriates in the turf of Boston Common, and analyzes and criticises the soil that under different municipal administrations has starved or made it green. He knows when, and by what hand, this and that great elm was set in the ground, and how it has conducted itself in its relations to the weather of two hundred and fifty years. That one small head can carry all he knows of this lore is amazing. Surveys, deeds, wills, colonial, provincial, municipal, and judicial acts, popular and family traditions, church registers, records of births, deaths, and marriages, are but a portion of the sources whence contributions are drawn to the mass of heterogeneous facts which he has assorted and grouped for the curious reader's satisfaction.

Boston has undergone more changes than most larger cities. The bold features of its original conformation have been all effaced by art. Its hills have been levelled, its ponds filled up, its surrounding shallows covered to a height above the tides. In very many instances costly structures have been more than once levelled and restored on the same site within the last fifty years. As nature made the peninsula, it was but a little more than two miles long, with an average width of less than a mile, and an area of less than a thousand acres. When, after the great fire of 1760, old William Palfrey restored his burnt house on the lot midway between Congress Street and Devonshire Street, on the north side of Water Street, sloops used to come up, and unload materials before his door. The bookseller's shop at the corner of Washington Street and School Street, lately occupied by Messrs. Ticknor and Fields, is a hundred and fifty years old, but it is one of an extremely small number of buildings that antedate the present century. For a hundred years after 1710, Boston scarcely increased its population. Nearly all of its beauty that is due to man's work is the product of less time than belongs to two generations. The saunterer down Beacon Street,

“Aurea nunc, olim sylvestribus horrida dumis,”

goes breathing the fragrance of hyacinths and jonquils in the shadow of palatial dwellings. We first trod it when a plank walk aided the steps from the State House to the water, and three ancient houses and one modern were all that stood along the way, and we laid our clothes on

rocks beneath the most westerly hillock on the Common, to bathe in the salt water that plashed up to its foot.

Of course we do not undertake to follow Dr. Shurtleff's steps with our critical lantern, through all, or anything like all, the extent and the labyrinths of his explorations. It would be toilsome, and it would be hazardous. Our memory and antiquarian reading, as far as they serve, answer to his descriptions, with no exception worthy of note. Since archaeology, so unlike law, *de minimis curat*, we will overcome our diffidence so far as to dissent from his opinion as to the origin of Julien soup. We strongly incline to think that the toothsome concoction was relished, under the name of *potage à la Julienne*, long before the days of our Boston Soyer. And if our memory does not cheat us, it was a gallant officer of the army, and not of the sister service, who caused the servant of the mysterious recluse of Apple Island to be flogged, and who thereupon learned from Charles Jackson, of the Supreme Court of Massachusetts, that law in that Commonwealth was an awkward thing to do battle against.

9.—*History of Rye, West Chester County, New York, 1660—1870.*

By CHARLES W. BAIRD. New York: Anson D. F. Randolph & Co. pp. 570. 1871.

WHEN, eighty years ago, our Massachusetts Historical Society was founded, one field of historical research they proposed to themselves for exploration was, the history of towns. These valuable compendiums of local history have since been greatly multiplied, and, assuming more considerable proportions, been given to the world in separate volumes. It is estimated that more than one hundred such works have been published relating to towns in this State, as many more to those in other parts of New England. They preserve for family history, its dates, alliances, and incidents, and afford a clearer insight than can in any other way be gained of the modes of life, and household economies of former generations. They afford us, besides, a glimpse beyond into the forest primeval of the races displaced. As the last feeble remnants of once powerful tribes are passing away, our interest deepens in their story. In the narrations sent home soon after the settlement, all that was then known of the Indians is to be found, but from later sources our knowledge of what they were has become much more extensive and exact. In Connecticut, where the material is unusually abundant, the inquiry has been pursued by scholars especially fitted for their task. The history of the Indian tribes by De Forest is replete with information with regard to them; and another authority, said to be the only

man living who can read Eliot's Bible, has been able recently to cover nearly the whole area of the State with Indian deeds. This is highly creditable to the honesty of the planters, the more so that their trade was not only fair and honorable, but the equivalents rendered so satisfactory to the previous occupants that they never manifested the slightest disposition to disturb their bargain. They were long after accustomed to come down from time to time to revisit the graves of their fathers, and hold their powwows in accustomed places, but again withdrew in peace and quietness. These deeds give the names of the chieftains of the Pequods and Nipmucks and other tribes, and also reveal to us many usages that prevailed among them. This is but one source among many from which we are enabled to form some notion of their characters and customs.

What is now Rye, previous to 1660, the period of its settlement by the whites, was occupied by several villages of Mohegans, who had cleared off the forest and made extensive plantations. Disbrow from Greenwich, near by on the east, with three associates, Coe, Stedwell, and Budd, in that year and those that followed purchased large tracts of their land until they covered not only the present area of that town, but Hastings, North Castle, and Bedford, in New York, and part, also, of Greenwich, in the neighboring State. Their limits extended more than twenty miles back into the country, with pretensions even to the Hudson. To them, original founders, were added other planters who subsequently were called the "Eighteen Proprietors." Their first abode was on Manussing Island, extending about a mile along the shore of Long Island Sound, but spread soon over Peningo Neck and other portions of the grant. The Indians gradually left the settlement. Muirson, the missionary in 1708, states, in a letter to the Society for Propagating the Gospel, that there were but twenty families then remaining in Rye of several hundreds which had existed there not many years before.

From what Mr. Baird tells us of the character and antecedents of the planters, they were in culture and means quite up to, if not above, the average of those who at times established themselves in places as remote. They were prosperous farmers dealing in cattle and wood. Mills and ropewalks, fishing and navigation, and the mechanic arts were early introduced, and they contained within themselves all the elements of a thriving community. They had little to fear from hostile Indians, whom they had always treated kindly and with justice. Philip's War in 1675 did not come near to molest them, though some of their young men took an honorable part in its fights. Due precaution was taken, however, against predatory attacks, and their stone garrison-house, forty feet by

twenty-four, with a round porthole in the gable, was torn down only three years ago. Their train-band was maintained in good discipline, and whenever there were requisitions on Rye for expeditions against Indians or French, there were always volunteers ready to go.

The sixteen towns included in the Connecticut government were, as far as concerned their own local concerns, independent communities, and, though they sent deputies to the colonial Assembly and conformed to its laws, these interfered but little with their right to do as they pleased. These town governments, which John Adams later termed one of the corner-stones of American liberty, were so constituted as to admit a large part of the inhabitants to an influential voice in their administration. In 1700, for sixty rate-payers, including the deputies and officers of the train-band, there was an office for every two of them. The territory not divided generally belonged to the eighteen proprietors, but there were town lands at the disposal of the whole body of voters. These were often distributed; and situated on the Sound, only twenty-five miles from New York, and ready markets for their surplus; operating as an incentive to industry and enterprise, the prosperity of Rye kept pace with that of any other of the settlements.

The domestic economy in these out-of-the-way corners, in the seventeenth century and early part of the eighteenth, was frugal and plain. Old houses still remain to tell us something of their household arrangements. Probate records enumerate their furniture and garments. Their abodes were of limited accommodation for the number that occupied them. There was generally a bed in every apartment, not excepting the kitchen. Tables and chairs were not abundant, but stools and benches were, and two or three chests of drawers in every family, for bed and table linen, raiment, and other valuables. They commonly possessed, we are told, in every household a warming-pan, it is presumed for use in case of illness; occasionally, shelves of books, and long candlesticks with backs to prevent the flame flickering in the drafts, which were suspended from nails in the beams. Their garments were of serge, kersey, or leather, the latter often handed down from father to son,—a custom in those days with more costly articles of apparel in wealthy families. The Bible and the rifle of course were indispensable. Life was ever precarious and perils numberless, and trust in Providence and self-reliance went hand in hand.

Rye was a healthy place, if we judge from the fact that there was no physician till sixty years after its settlement. The people were too busy for much litigation; they had their justice of the peace, but no lawyer till 1770. The prevailing religious views were congregational; and though in 1703 Colonel Fletcher, the governor, introduced the

church system of England, instituting wardens and vestry, and placing the parsonage and glebe in possession of the rector, the vestry chosen from all the rate-payers were still Dissenters. Paupers were put up at auction to the lowest bidder, but treated with humanity. About the middle of the last century there were one hundred and seventeen slaves in Rye. Near the market-place were the stocks and whipping-stool. Public-houses were rather above the average in excellence and accommodation, as the great post-road connecting New York with the Middle States passed through the town. But even the best were not very neat or well provided. At least Strang's was not, where Madam Knight passed her wretched night in 1704. They were better later, in the days of Haviland's and Pemfield's, where John Adams stayed in 1774, and Washington in 1789. Before steam quickened locomotion, it took a week to traverse the two hundred and fifty miles between Boston and New York, and the coaches east and west at nightfall deposited their loads of weary passengers at the Stage House. This was the great event of the day for the town and the tavern itself till early morning, when with much circumstance the heavily laden conveyances again took their departure, crowded with travellers of every condition, some sleeping off their weariness, others regaling themselves with curiously concocted beverages, then more in use than was for their advantage. The spacious bar-room, set apart in inns for travellers, with high settees, sanded floor, and a load of logs ablaze on the capacious hearth, is a scene of the past. There people of all conditions freely mingled in animated talk about crops and politics ; the eloquent harangued, the pugnacious disputed ; there were good jokes to amuse and songs to enliven. If more was drunk than due moderation justified, it was worked off by hard labor and constant exposure to the weather, and at least good fellowship and social interchange in some degree redeemed what was objectionable.

The town having been settled from New England, it was considered a great hardship by its inhabitants that they should be wrenched away from all their old associations against their will, and placed under the jurisdiction of New York. Yet such was their fate. Not long after the Dutch surrendered New Amsterdam, King Charles gave that province to his brother James, with its dependencies, and in process of time a new boundary line was established, which placed Rye within its jurisdiction. This arbitrary act was aggravated by a patent granted of a valuable portion of their territory to Colonel Harrison. Upon this they revolted and seceded back to Connecticut. When the sheriff of West Chester summoned a town meeting for election of officers, a body of fifty stalwart troopers appeared and broke it up. For four years they

continued in disaffection, but were finally compelled to yield, and became about 1700 part and parcel of New York. They had many accessions to their inhabitants from other places, Friends and Huguenots; but the descendants of the original planters form even now an important part of the population, eight of the proprietors being largely represented. The present number of inhabitants is seven thousand one hundred, but this is only a small part of those who dwell within the limits of Rye in its greatest extent.

When the discontents that led to revolution and independence agitated the Colonies, there were many minds in Rye, some loyal to the king, others to liberty. There were heart-burnings and discord, and, what was worse, suspicion. Men of sufficient character and consequence to be regarded as dangerous were thrown into prison, spirited away, or placed under bonds. When Washington, in 1776, after the battle of Long Island, fell back into West Chester, Howe, in pursuit, landed twelve miles below Rye. After the battle, October 28, at White Plains, then forming part of the town, the Americans drew back two miles into strong posts among the hills. The British troops, not venturing to attack them, early in November retired to New York. West Chester continued during the war neutral or debatable ground, and was subjected, says Irving, to be foraged by the Royal forces and insulted by refugees and tories. No region was more harried or trampled down by friend or foe. Cowboys and Skinners committed all sorts of atrocities. Barns and houses were consumed or sacked, fences burnt, and cattle driven away. Close by the sea, Rye was perpetually exposed to depredations, and the women and children were kept in constant alarm and terror. Hostile armies occasionally moved through the place, and there was fighting and bloodshed at Kniffen's Hill and other well-known localities. When, after eight years, peace at last came, the town presented a sad scene of desolation. Farms were laying waste, houses in ruins, and the people utterly impoverished. Many families, before the troubles rich and influential, went as refugee loyalists into voluntary exile, taking refuge in the provinces still dependent on the crown.

Rye had, however, too many resources in its position and the character of the people not soon to regain its prosperity, and the soil being fertile, the climate from proximity to salt water salubrious, and the scenery attractive, many families of note made it their home. Before the war, Peter Jay, of Huguenot stock, had taken up his abode in a stone house eighty feet in length, where his eminent son, John Jay, the first Chief Justice of the Supreme Court of the United States, was born, and where the family long resided. Ogdens and Hoyets were there, and other familiar names. When Joseph Bonaparte, after the down-

fall of his brother at Waterloo, was seeking a residence in America, he offered one hundred thousand dollars for an estate at Rye. His offer was not accepted, and he established himself at Bordentown in New Jersey. Lafayette, who had doubtless often passed through the place in the war, was there again in 1824, and at that time an interview took place there between him and Mrs. Thomas, widow of Major-General Thomas of the Revolutionary Army, not of the one who died in 1776 in Canada, who was from Kingston, Mass., but another of the West Chester family.

This volume will find a welcome with many who from other parts of our country look back to that neighborhood as the land of their nativity or that of their fathers. Its value will be especially appreciated by antiquarians and all diligent inquirers of times past. Even to those who only know the place from his graphic descriptions and plans that explain them, Mr. Baird affords a very distinct idea of the spot. His subject is judiciously disposed, the style is simple and scholarly, and the incidents sufficiently interesting to engage attention and reward it. When a publication of this nature is good enough to deserve a place in our libraries, the information it contains is ever in request, and it is sure of a wide circle of readers.

9.—*Sketches from America*. By JOHN WHITE. London: Sampson, Low, Low, and Marston. 1870. 1 vol. 8vo. pp. 373.

THE time was, and that not many years ago, when the American continent and its inhabitants were to the European reading public almost a *terra incognita*. The educated man of the Old World, and especially of England, hardly ever came here, unless upon business, without the intention, more or less distinctly defined, of making a book of his experiences. As a rule, too, these observers, when they carried out their designs, strictly followed the advice of the elder Weller to Mr. Pickwick in regard to abusing us sufficiently. In the case of the English authors this peculiarity was accompanied by another, eminently characteristic of their nationality; after indulging towards America, and all men and things American, in as much contempt, dislike, and ridicule as they could command, — the whole laid on with that peculiar *de haut en bas* British self-sufficiency which no other people can imitate, — after keel-hauling us, as it were, and flogging us round the fleet, and, finally, rubbing the essence of intellectual brine into our lacerated feelings, — after indulging in all these little amusements, the entertainment generally concluded with an exhibition of most innocent surprise and pity that, as a people, we could be so thin-skinned and

sensitive as to cry out against what others said of us. John Bull never seemed to remember that we were a young and struggling people; that we had our way to make and could not as yet tell our own story. Sydney Smith sneered out his famous query as to "who reads an American book?" and men whose books were read wherever the English tongue was spoken, men like Moore and Marryat and Dickens, came and went, and depicted the nation which had no spokesman and no audience as if it also had no feelings. No one in this country will now deny that Americans were, and perhaps still are, too sensitive to this sort of criticism. After all, however, such thinness of skin is not peculiar to the New World. It was long before we could fairly retaliate in kind; for there did not soon appear on this side of the Atlantic any writer the keenness and recognized power of whose pen placed us upon a footing of complete equality with our eternal critics. He came at last, and at once the tables were turned,—those who had so long and so serenely lectured others upon the folly of being sensitive, and deplored the discomfort of the thin-skinned aliens, these same people could not fume and sputter sufficiently when the bitter draught was returned to their own lips. The paroxysms of wrath and indignation and protest of the British public and the British press over Hawthorne's exquisitely humorous and truthful portrayal of "Mrs. Bull" in "Our Old Home" will not soon be forgotten either in England or America: it was a Zama for many Cannæs. It marked the settlement of an account. At that time G. A. Sala, as a special correspondent, was abusing the "universal Yankee nation" regularly and in the approved old style; he did not draw; the preponderance of metal was distinctly on the other side. The British mind then passed into a new vein of criticism of a much higher order, and to this class of work belongs Mr. John White's "Sketches from America."

Mr. White is evidently a young man, and the title of his book also tells us that he is a fellow of Queen's College, Oxford. He is one, therefore, of that class of educated young Englishmen who amuse themselves by turning up in out-of-the-way places all the world over, and who follow game and seek adventure wherever the one or the other are to be found.

What Mr. White came to America for does not very distinctly appear from his book. It might have been to prepare a report upon Canada for the Colonial Office, for it is to the condition of affairs in the Dominion that he seems to have devoted most attention. It is wholly unnecessary, however, to follow him into his careful study of provincial politics. Such are rarely interesting, and in the case of the Canadas they are peculiarly otherwise. The Canadians seem singu-

larly faithful to their English model. The Dominion has its land question, like the mother country, and also its church question, — neither of them easily understood. There is also the question of race, and the question of confederation; finally, and above and beyond all, are the questions of independence and of annexation. On all these topics, as well as upon the questions of physique, of climate, of scenery, and of soil, Mr. White has a good deal to say, and he says it concisely and thoughtfully. While, therefore, this part of the volume is of wider interest to Canadians than to Americans, it still contains a body of good thought and useful information for the last, which can nowhere else be obtained in an equally accessible form.

The portion of Mr. White's book so far referred to is didactic, but by no means always entertaining; when he comes to dealing with "the States" and "the citizens of the great Republic" he makes no attempt to instruct, but sets out with the simple view of recounting a very lively episode in his travels, which he evidently enjoyed very much himself and which he takes enjoyment in describing. Naturally, being in this frame of mind, and having a clear simple style and a well-developed sense of humor, he contrives to make his readers share in his enjoyment. Intent upon going to the West and seeing Chicago, the prairies, the Mississippi, a grain-elevator, a railroad, and the other like objects of interest in that region, he heard one day of a party of newspaper writers bound on an excursion from Chicago to the end of the then uncompleted Pacific Railway. It was suggested to him that he should make himself one of the party. As he was in no way connected with any newspaper, he met with some difficulty at first in getting himself admitted into the fraternity, but at last a pious fraud overcame all obstacles. He pronounced himself the correspondent of some English or Irish paper, which appears in his account of the trip as "The Orange War-Cry," published in the town of "Kilpapist." Thus accredited, he started off for the plains in company with about a hundred and fifty editors and correspondents, on one of those great excursion trains composed of "palace cars" and "hotel cars," "sleepers" and "Pullmans," such as are only possible in America. So many descriptions of similar excursions, and indeed of this particular one, have already been given to the public, that it would seem as though little could be left to say upon the subject. Here, however, was an educated young Oxonian, roughing it on the plains with a motley crew of newspaper writers; his impressions could not but be worth having, if he only had the faculty of conveying them to others, and this he had. Not much that is novel can be said of a run in the cars across the prairies, and the author wisely does not attempt it. He gives his impressions very

naturally and in few words, but devotes his energies more particularly to describing the *matériel* of the excursion. Of course it was largely made up of generals and colonels and majors and captains; this was inevitable, for, since the war, the rage for military titles has assumed proportions throughout the West even more alarming than formerly, and the rank and file has wholly ceased to exist. Most of these men had, however, fairly earned the titles they bore, nor does the author indulge in any of the usual sneers at his companions in this respect. There was, however, on this occasion, an exception to the general rule as regards military titles, and, indeed, a very important one; this particular excursion was graced by the presence of no less a person than the distinguished and irrepressible Mr. George Francis Train, who made himself the soul of the party. Mr. Train neither was, nor pretended to be, in any way associated with the press, but rules intended to secure the exclusion of ordinary mortals had no potency as against him. "In vain was it explained to him, with all possible clearness and point, that the excursion was only for writers. He is a man who rises superior to hints, and who, whether he wants to provide himself with amusement by getting into a party, or to make political capital by getting into a jail, generally does what he wants." That the editors would, however, have deprived themselves of a large part of their entertainment by excluding the late inmate of a "British Bastile" soon became very evident; he was buffoon in chief to the party. One instance of his proficiency in this capacity, as told by Mr. White, is very amusing. At North Platte they encountered a body of Ogalalla Indians, who were living near the fort and under the protection of the government. The correspondents at once seized with professional ardor on this opportunity of "interviewing" the "noble red man," and a formal "palaver" was improvised. Colonel S——, the spokesman of the party, first addressed "Big Mouth," the chief of the tribe, in a set speech which was discoursed to him through an interpreter; what ensued can best be given in Mr. White's own language:—

"Big Mouth began to reply as soon as the interpreter ceased, speaking in his own Indian tongue. It would be hard to exaggerate the calm dignity, the strong self-reliance of his manner. His bearing was the bearing not only of a gentleman, but of a very haughty one, who liked to be respected and was used to it. . . . Then our jester, Mr. Train, who had been unusually quiet for some time, advanced into the middle of the circle. "Gentlemen," said he, "I don't think very much of the speech just made by our good friend in the red skin. I flatter myself that I can make you an infinitely more startling address, and in the very same language; and immediately he commenced a speech

in the loudest and most impetuous gibberish, with the wildest and most extravagant gestures, jumping, flinging his arms abroad, tearing his hair, and rolling his eyes in a manner peculiar to himself. Probably it would have been impossible to go through any buffoonery more keenly insulting to the feelings of Indians. None of them at all relaxed the gravity of their expressions, and Big Mouth himself said to the interpreter, as that functionary afterwards repeated to us, 'I know that is no real language.' When Mr. Train had run down, an Indian dance was called for. A war-dance was what we desired; but the chief objected, saying it was contrary to the usages of his tribe to dance their war-dance, unless somebody had been killed and scalped. Of course Mr. Train immediately proposed that somebody should be killed and scalped on the spot; but the general voice was raised in favor of the best performance attainable, without having recourse to human sacrifice. Two young red-skins stepped out for the dance. . . . All the red-skins looked as if they had quite forgotten that it was a mere exhibition got up to order, and that they and it were surrounded by observers; as you looked at their excited faces and movements, growing more and more eager and wild with animation, as you listened to the cries, growing quicker and sharper and louder, it was hard not to imagine that the dance had some real significance for them, and was the expression of a feeling that mastered them the more the more it got utterance,—so rapt and so enkindled and so utterly relieved from self-consciousness did the whole wild assembly appear. After the grave performance came the burlesque; after the savage, civilized man took the stage; Mr. Train was again to have his turn. Advancing again into the centre, he assured us that he thought as little of Indian dancing as of Indian speaking; as he had competed with the latter in eloquence, so he would compete with the former in elegance. Whereupon he took off his coat, bent his tall body nearly double, and in that posture commenced capering round and round the circle, flinging his legs out in the most grotesque manner, and uttering yelps, barks, and howls in comparison with which the Indian cries were notes at once most quiet and melodious. Probably, with the single exception of the gibberish speech in imitation of Big Mouth's address, this performance was quite the most offensive to Indians that human ingenuity could devise; but that it was much more ludicrous than any comic dancing to be seen upon any stage must be readily and freely conceded. The editors, however much shocked, fairly shouted and screamed with laughing. . . . Big Mouth, indeed, and the elder men, looked on with that unmoved composure which might almost have led you to suppose that they saw nothing odd in the performance. But the younger men and the

women could not keep their countenances at all ; and I particularly observed one elderly and portly squaw, who, after vainly struggling with her emotions, broke down and shook all over with merriment. When Mr. Train, by prolonged caperings, had exhausted even his wonderful bodily powers (for he is a man of fine figure and very remarkable strength), we moved off towards the train, musing much by the way on the superiority of white men to red."

Leaving the Indians, the excursion train passed along over the great inland table-land, catching glimpses now and then of the old Mormon emigrant trail, marked here and there with bleaching bones ; they paused at Julesburg, "usually called by Western men the 'roughest place on this side of hell,' and thoroughly deserving its reputation," and then came to where the road ended, and where the construction parties were laying several miles of track each day. Here, after being duly photographed, as a matter of course, the party divided ; the larger portion returning to Chicago and carrying Mr. Train with them, while a few adventurous spirits, of whom Mr. White was one, pressed forward as best they could to Denver and the mountains. The description of this portion of the journey is very fresh and lively, full of keen appreciation both of men and nature, and even more new to Americans than to English. The following is certainly very entertaining reading, especially to any one who has himself had any similar experience :—

"In preparing for our long drive to Denver, our party had been organizing itself in American fashion. Not only was a certain gallant colonel commanding, as aforesaid, but a commissariat had been formed, and a number of officials duly chosen. There was the purveyor of bread and ham, the purveyor of coffee, the general superintendent of cookery,—a whole ministry, in fact, so provided with assistants and deputies and subordinates, that I was almost alone in my exclusion from place. Besides claiming immunity as an alien, I had pleaded personal unfitness for the responsibilities of office. Our party, like a perfected organism, directly we came to a halt, proceeded to the discharge of its several functions by the co-operation of its several parts. The deputy-assistant fire-lighter got together wood, and, aided by superiors in his department, lit a respectable watch-fire on the prairie. Then the purveyor of coffee got out his stores, recently purchased in Cheyenne ; and a thrill of horror ran through the assembly on finding that the coffee was in the bean. Then the representative of Europe was forced into office as 'coffee-grinder general.' But how was one to grind ? The nearest coffee-mill was undoubtedly at Cheyenne. The next nearest, in all probability, at Denver, not less than a hundred

miles off. Luckily one of our party, a missionary from India, lately turned editor of a religious paper in the West, a man taught by his sacred profession to feel for all human distress, came to comfort and relieve me. He had seen coffee ground in the Himalayas by being tied up in a handkerchief and pounded with a stone. We tried the plan eagerly, and we declared it a success. Emptying the coffee thus ground into a coffee-pot, we stood by the watch-fire awaiting the result. Tired editors thronged around, almost equally anxious. We had to plead hard, that the decoction should be allowed its fair time for boiling, so sanguine and keen were the bystanders. Then a tin mug was got from the ranch, and the colonel in command was bidden to taste. 'Well, did it boil, do you think? Is it good?' asked many voices at once. He answered, without enthusiasm, 'Yes, I guess it boiled. It's hot enough any way. But'—addressing us in particular—'are you quite sure you put the coffee in at all?' Of course we had put the coffee in; and we looked in an appealing way to the next taster, to vindicate us. He stopped drinking suddenly, pressed his hand on his throat, whence a strange gurgling sound was proceeding, and said, with impeded utterance, 'Yes, there's coffee in it surely. I've just swallowed a coffee-bean. I rather guess it'll choke me yet!' Then the coffee-grinder general was scowled at all round; and as, in those days, there was no good English precedent for a minister clinging to office against a hostile majority, he at once threw up his place, not again to abandon the ease of private life."

And so Mr. White trudged on to Denver, walking before the wagons with any one who would bear him company. At Denver the party was received with great honor and entertained at a banquet, while the correspondent of "The War-Cry" was edified by the Denverites on the subject of Mr. Hepworth Dixon's book and the famous "Bob Wilson,"—a piece of information which he evidently retails for Mr. Dixon's benefit with great suppressed enjoyment. "Bob," it seems, is a wag, and Mr. Dixon is a gentleman of great credulity; but since Mr. Dixon's book got to America, "Bob," it would appear, has led the life of a dog in Denver; Western "chaff" is not refined. Of course, being an Englishman, Mr. White had to ascend Gray's Peak, or some other mountain; having done this, and afterwards had a narrow escape from being lost and frozen in a snow-storm on the prairies during one of his long tramps, he got back to Chicago just one month from the day he left it. It is with the events of this single month out of his stay in this country that he fills up all he has to say of us; by so doing he has contrived to make up a lively book on a trite subject, and leaves us before we are tired of his company.

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ART. I.—VOLCANISM AND MOUNTAIN-BUILDING.

IN two articles published in previous numbers of this Review (Vols. CVIII. page 578, and CIX. page 231) we have discussed the phenomena of earthquakes and volcanoes, endeavoring to convey in popular language some idea of the nature, extent, and frequency of these remarkable manifestations of the internal forces of the earth. In the last of these two articles it was suggested that occasion would be taken to continue the consideration of the subject, and to endeavor to explain, or at least throw some light on, the nature and connection of the chief causes which have been concerned in carrying on that complicated series of geological dynamics which we include under the comprehensive term "volcanism," and of which the earthquake and volcano are two of the most striking manifestations. The subject is one which has always commanded the attention of geologists, and suggested, or even provoked, discussion among them. The difficulties which it presents, however, become apparent, when we learn, through examination of the printed records of these discussions, how little agreement there is among geological authors, and how widely they differ in regard to points which, as one would suppose, ought long since to have been settled.

We have repeatedly, in the course of the preceding articles, referred to the intimate relationship existing between the phe-

nomena of earthquakes and volcanoes, — a relationship which can hardly fail to have become apparent to all who have given even a limited amount of thought to the subject. We have now, however, to go one step further in the same direction, and show how the consideration of the subject of volcanism leads most directly and naturally to that of the formation of mountain chains, or, in still more general language, to the study of the forces which have drawn the outlines of the continents and moulded the surface of the earth into its present relief.

The difference of elevation between the summit of the highest land and the bottom of the deepest ocean is but trifling, as compared with the whole diameter of the globe, yet of what immense importance in the economy of nature are our mountain chains, and how thoroughly are our most weighty interests and avocations dependent on the form and elevation of the continental masses! Mountains as geographical and geological facts are of the highest significance to the student of natural phenomena, in whatever light he considers them. As agents in determining the character of the climate, the courses of rivers, the nature of the soil, the migrations of nations, the distribution of languages, manners, and customs; in short, in their relations to man and nature, from the point of view of physical geography, they play the leading part. As permanent records of past geological changes in the history of the earth, mountains are all important to the student of geology. What would this branch of science be, without mountains and the study of mountains! The results of the dynamics of the globe are registered in the mighty ridges which encircle it, and mark the outlines of its continents and oceans. Indeed, we can hardly conceive of the present order of things as existing at all without these visible results of the manifold causes which have worked together to make the earth habitable.

Hence, the study of the structure and mode of formation of mountains is the study of the greatest problems with which the science of geology presents us. Thoroughly to work out and comprehend the structure of all the mountain chains of the world would be little different from thoroughly working out and comprehending its geology. There is hardly a problem presented by the science which would not find its application

in some one of our mountain systems. Orography, then, or the study of the structure of mountain chains, is the study of geological phenomena on the largest scale and from the most generalized point of view.

It cannot fail to have been impressed on the mind of the reader of the preceding articles, that there is an intimate connection, in the character of the results at least, between the forces by which volcanic and earthquake action is kept up and mountains originated. A volcano is, in fact, a mountain, and to the popular mind there is little difference between an isolated elevation and a group or line of them; between a mountain and a chain of mountains, in short. But not a few of the latter are almost or quite exclusively aggregations of volcanic material; and when we come to rocks which are eruptive, that is, which have been poured forth from the interior of the earth, although not technically volcanic, we find that these constitute a large portion of a great many mountain chains, and especially of the highest and grandest. And the more we look into the matter the more we shall be convinced that the formation of mountains and the development of continents are also closely correlated phenomena. Mountains are but the skeletons of the continents. Wherever a lofty chain of mountains has been raised above the sea-level, there is a central mass with a tendency to grow and spread itself laterally, under the influence of denuding agencies; and, unless counteracted by a general subsidence, there will be a steady increase of breadth of the region, at the expense of the height of the more elevated portion. If the material is carried down and deposited under the ocean, then, whenever there is a change in the relative level of sea and land, so as to bring the newly formed strata above the water, these will be found to present evidences of the conditions under which they were deposited, in the form of marine fossils, which will be more or less abundant, according as the physical conditions varied at the time the deposition took place. If two chains of mountains are so situated with respect to each other that continental growth may take place between them, the process will, of course, be the more rapid, and the newly made land will cover a proportionably greater area. Every continental mass, then, will be found on analysis to con-

sist of one or more chains or groups of mountains, and large areas of lower land which has been derived from the long-continued erosion of the more elevated regions. An examination of good topographical maps of the different continents will show this relation most clearly; especially if aided by sections across the land-masses transverse to the direction of the leading chains of mountains which traverse them.

It is clear, then, that when looking at the subject from the broadest point of view, and endeavoring to make out what agents of geological change have been most widespread and general in their action, we cannot separate the phenomena of volcanoes and earthquakes from those of mountain-building and continental growth. One key must give access to all the mysteries of geological dynamics. The nature of this key was first rather vaguely shadowed forth by Leibnitz in his "*Protagæa*"; but the key itself was not really forged until long after, when Humboldt began to group the physical phenomena of the universe into one harmonious picture, or *cosmos*. Leibnitz recognized the fact that the earth had cooled from a condition of igneous fusion, and that in this cooling inequalities of the surface would be likely to have arisen. But it was reserved for Humboldt to announce a cause of volcanic action which would be always operative, both through the past geological ages and in all future time. As first enunciated by him, half a century ago, it was intended to be applied solely to volcanic phenomena, and was thus expressed: "All volcanic phenomena are probably the result of a communication, either permanent or transient, between the interior and exterior of the globe." Ten years later, the idea of one general cause for all the varied forms of volcanism has clearly worked itself out in Humboldt's mind, and was thus formulated in the "*Kosmos*": "In one comprehensive view of nature, these all (namely, the phenomena of volcanism) fuse together into the single idea of the reaction of the interior of our planet against its crust and surface."

While now most geologists admit the validity of this explanation, so far as it goes, the discrepancies of opinion which have arisen in showing how the reaction in question is brought about are very considerable. As long as the theory was only vaguely shadowed forth, and no attempt was made to go into

details, but little objection could be offered to it. But when, as facts began to accumulate and more precision of statement and clearness of development were required, in harmony with the progress of modern thought, the difficulties of the case became more and more apparent and the divergencies of opinion greater. Humboldt may be said to have furnished a blank key, which looked, at first, as if it would fit the lock ; but every examination has revealed some new ward to which it must be adapted ; and different observers have shown themselves very much in doubt as to how it was to be filed to fit the complications which they had discovered, and which combine to make the opening of the lock anything but the simple task which it seemed at first to be.

As time passed on, and the various borings and mining operations all over the world gradually gave absolute certainty to the at first rather hesitatingly received fact of a universal increase of temperature in descending beneath the earth's surface, the views of Humboldt began to be generally received and acquired something like this form : The earth is gradually cooling from a condition of intense heat and igneous fusion. During this cooling an exterior crust or shell has been formed. This crust has, from time to time, been endeavoring to adapt itself to the still shrinking nucleus, and, while so doing, has from time to time yielded to the accumulating tension. The vibration resulting from this sudden yielding has been the principal cause of earthquake shocks, and through the fissures thus formed the molten matter of the interior of the earth has, at various intervals, found its way to the surface in the form of volcanic eruptions and accompanied by all the phenomena of volcanic action. The crust of the earth, in endeavoring to adapt itself to the nucleus, has been in places more or less uplifted or depressed, folded or plicated, thus giving rise to those irregularities of the surface which we call mountains, and which, also, often owe their existence to a direct pouring out of the eruptive material through an elongated fissure, this material then forming the axis of the mountain mass or range.

Those who are familiar with the various geological textbooks in use will recognize that this is the simplest way of

expressing the generally adopted theory ; but, as will presently be seen, there is the widest variety of opinions and hypotheses when anything like an approach to a detailed statement of the *modus operandi* of the internal forces is attempted.

In the first place, there is considerable diversity of opinion among geologists as to the manner in which the earth has consolidated while cooling. We know that the specific gravity of our planet, as a whole, is about double that of its external crust ; and to account for this superior density of the interior, we have to endeavor to combine three conditions, in regard to each of which there is much uncertainty ; these are, the nature of the materials of which the portion of the earth beneath the crust is made up, the amount of condensation effected on this by pressure of the superincumbent mass, and the reaction of the internal heat against that pressure. Of course if the interior of our planet consisted chiefly of metallic iron, or any other heavy metal, it would have a higher specific gravity than if silica predominated ; but, even if exclusively formed of a material as light as quartz, the earth ought, according to physical laws, to be even much denser than it now is, unless there be some cause acting to diminish the condensing effect of pressure. Different physicists have made various calculations on this subject, the results of which are not very satisfactory in their agreement with each other. But it is certain that if substances continue to have their density increased by pressure in descending towards the earth's centre, in the same ratio as they are found to do at the surface by actual experiment, then we should have to penetrate to but a few hundred miles in depth, to find water as dense as platina, and all other substances similarly compressed. The force which acts against compression, so as to make the earth's density, as a whole, only twice that of its crust, is, in all probability, the expansive action of the internal heat. But we know too little of the properties of bodies at prodigiously high temperatures and under immense pressure, to say positively whether, under such circumstances, the materials of which the earth is made would have a solid or a liquid form ; and neither astronomy nor mathematics have been able to give the geologist any valuable assistance in deciding this question. On the contrary, the most eminent authorities in these

departments of science have published the most contradictory statements as the results of their investigations in regard to the condition of the interior of our planet. Hence, so far as the astronomical evidence goes, geologists are at liberty to form their own theories on this subject, and some have inclined to the belief that the earth is solid throughout; others stoutly maintain that it consists of a solid nucleus, with a liquid shell near the exterior crust; while the prevailing opinion has been that the solid crust encloses a mass of matter fluid nearly or quite to the centre. This latter idea has been naturally adopted, because we are accustomed to see masses of melted metal or stone cool first on the surface, while the interior, if the mass be large, remains for a long time in a fluid condition. The theory of a fluid interior has also been sustained by considerations connected with the widespread distribution of volcanic orifices, and the vast amount of liquid matter which has been poured forth from them at different epochs. The connection of earthquake shocks with the phases of the moon, adverted to in a previous article, is not without an important bearing on this question. The results attained by all seismologists who have investigated these subjects do appear to indicate that there is a decided action of the moon on the interior, analogous to that which it exerts on the waters of the ocean. The evidence is not as decisive as might be wished, but is too important to be overlooked in the discussion of a subject where precise data are hardly to be obtained or expected. The later researches in physics, however, have shown that there is no such sharp line dividing solids from liquids as was formerly supposed to exist; and all the requirements of geology would be satisfied if it should be admitted that the material constituting the interior of the earth, if not already in a liquid condition, was capable of assuming it when relieved of pressure to a certain extent.

All geologists will agree in this, that the disturbances of the earth's crust, by whatever name we please to call them, whenever acting independently of attraction, or against gravity, are due to internal heat. This, in some way or other, is the cause of all earthquake and volcanic action as well as of mountain-building. If the earth were, as the moon appears to be, entirely cooled down, the heat of the sun and the attraction of

the sun and moon would then be the sole dynamic agents in producing geological changes. These changes would be affected chiefly through the action of water. The tidal current, raised by the lunar and solar attraction, the powerful, although slowly acting agencies of rain and rivers,—these would be the principal agents of geological change. But these tend almost exclusively to abrade material from the more elevated, and spread it out again upon the lower regions. Hence, the dynamical agencies at work on the earth's surface, supposing the effects of internal heat to be no longer in action, would be directed to reducing inequalities of height; in short, to levelling down the mountains and filling up the valleys. The character of the changes produced by the internal heat of the earth, on the other hand, is antagonistic to this; not exclusively, but nearly so. The proof of this is visible everywhere: in the mountain ranges and single peaks made of lava and volcanic débris; in the ranges having an axis of eruptive rock, which has been thrust up from below and carried the overlying stratified rocks with it; and in many other ways.

It being universally admitted that it is the internal heat of the earth which gives rise to the phenomena of volcanism, we have to inquire in what way the results indicated in our previous articles are brought about. The disturbances of the crust by earthquake shocks present the least difficulty in their explanation. Admitting the gradual cooling of the earth as a whole, we find no difficulty in understanding that this cooling may be unequal and irregular in its progress and distribution. This unequal cooling cannot fail to give rise to unequal tension between different parts of the crust; and as the force accumulates until it overcomes the resistance, so, from time to time, as the yielding takes place, there will be a sudden jar or shock given to the surrounding region, which will be more or less severe, according to the amount of force expended in overcoming the resistance. This sort of operation will go on whether the materials of the earth's crust expand or contract on cooling, or even if they, during a portion of the cooling, contract and afterwards expand. That this is the origin of the great earthquakes is proved conclusively by their character and distribution on the earth's surface. Their association with coast lines,

mountain chains in process of upheaval, and recent geological formations, affords sufficient evidence that they are not local phenomena, but linked in the closest manner with those other occurrences which have to do with the building up of mountains and the shaping of the outlines of the continents.

Volcanic phenomena, on the other hand, are vastly more difficult to decipher and refer to their origin, since they are more complicated in every respect, involving chemical as well as mechanical causes and results. To account for all that we know of volcanic rocks is plainly enough a difficult task, since hardly any two eminent authors fully agree in their ideas on this subject. And the larger one's experience and field of observation has been, the more difficult the task of reconciling and correlating all the phenomena has been found to be. Hence, the theories have mostly come from those geologists whose training has been chiefly chemical, and who have looked at nature almost exclusively through the bars of their laboratory windows. Those whose powers of observation have had the widest field for their exercise have had the most vivid perception of the complicated character of the phenomena of volcanic action, and have usually preferred to leave their correlation to others.

The work of Richthofen, the title of which was among those placed at the head of a preceding article on volcanoes, forms an exception to the above remarks, since its author has had an uncommon, in fact almost an unparalleled, range of observation. Having begun with the critical study of the classic volcanic regions of Hungary and Transylvania, he was enabled to carry his researches in an almost unbroken line entirely around the globe, ending with the grandest field anywhere presented to the geologist in this department, the Cordilleras of North America. In several respects this work of Richthofen's,—“The Natural System of the Volcanic Rocks,” as it is called,—is one of the greatest importance to the student of dynamical and structural geology. It is the first attempt to go into anything like detail in the investigation of some of the most difficult problems of this branch of the science. That such a work should not meet with immediate attention on the part of the general public was to be expected; that it should undergo

criticism was to be desired, by its author, no doubt, as well as others ; but, that its positive statements of facts of the highest importance in their bearing on the phenomena of volcanism should be overlooked, and even denied, is something which does not argue well for the comprehensiveness or candor of those thus placing themselves in opposition to the introduction of a "natural system" into that which before had no system at all connected with it. In the course of this article we shall endeavor to bring out some of the more prominent features of Richthofen's great paper, and will, in the proper place, give an idea of some of the criticisms which have been made upon it. But further light must be thrown on the general subject of volcanism, before details can be made intelligible to the general reader.

If we had only the volcanic phenomena of the present day, or active volcanoes, to deal with, the task of unravelling their mysteries would, perhaps, not be one of so great difficulty ; but, as soon as we begin to elaborate our materials, and endeavor to correlate the results obtained in the various lines of research, we find ourselves confronted by an immense mass of facts going to show that our present volcanic outbursts are only the last remains, or dying out, of a series of geological events, the scale of which was formerly much grander than it now is. We find, without going back to any great distance in geological history, that there was a time when, instead of being poured forth from scattered isolated orifices, the eruptive material found its way to the surface through linear rents, or fissures, which often must have extended for hundreds, or, perhaps, even thousands of miles. We find the material which has thus been poured forth occupying the surface in vast sheets, often lying in nearly horizontal beds, and covering an area of many thousand square miles. We find vast chains of mountains almost wholly built up of volcanic rock, and we are able, on careful examination, to recognize the fact that these masses have not been brought to the surface in lines radiating from a centre, that centre being what we call a volcano ; but along a linear axis, in the form of "massive eruptions," as they are called by Richthofen, who has been the first person to clearly distinguish between the two kinds of eruptive action, and to give a name

to *massive*, as distinguished from ordinary *volcanic*, eruptions. The necessity of keeping in mind the difference between volcanic materials erupted from a crateriform opening and those poured forth from a linear fissure was made evident by Professor Dana more than twenty years ago, in his admirable generalizations on the geological results of the earth's contraction and the formation of continents.* This idea was also clearly present in the mind of Humboldt at the time of the publication of the first volume of his *Kosmos*, and Richthofen has in fact carried out some of the suggestions then made by him with regard to the necessity of investigation, by competent lithologists, of the different portions of volcanic ranges which have been piled upon each other at successive epochs and in various ways. And yet we find Mr. Scrope, the veteran author of a much-quoted general work on volcanoes and of the classic description of Central France, denouncing in the most violent language those geologists who think they see any difference in the manner in which volcanic rocks are now and have formerly been erupted.† This fact alone will answer as a sufficient demonstration of the difficulties which the study of volcanic rocks presents, and of the disagreement in theoretical views among geologists, as soon as they begin to enter into details with regard to the mode of volcanic action.‡

The distinction between massive and volcanic eruptions has been excellently illustrated by Richthofen, as follows: "It is well known that small cones are frequently met with on the slopes of larger volcanoes. If they occur in large number, as on Mount Etna, they are usually situated in lines which radiate

* See "Geology of the Exploring Expedition," and a review of the same in the North American Review, Vol. LXXIV. p. 301, by the author of this article; also American Journal of Science (2) ii. 335; iii. 94, 176, 381; iv. 88; vii. 379.

† See Scrope in Geological Magazine, Vol. VI. p. 512.

‡ Mr. Scrope goes still further in his misconception and misrepresentation of Richthofen's views. He says, "the value of M. Richthofen's"—to an Englishman all foreigners, whether German barons or otherwise, are "M.s"—"Natural System of Volcanic Rocks, as a contribution to the science of geology, may be estimated from the fact that he denies the occurrence of any volcanic rocks in the series of geological formations preceding the tertiary era." The simple fact being that "M. Richthofen" has, for convenience, and following the large majority of authors, chosen to designate the eruptive rocks of the tertiary era as "volcanic," and those of preceding epochs in another manner.

from the crater. Each of them is built up of layers of scoria and ashes sloping away from the centre, where a crater is immersed, and such cones will occasionally emit currents of lava, and be in fact the repetition on a small scale of the mother volcano. Just as these parasitic volcanoes have their roots in the glowing lava, volcanoes in general must, as is demonstrated by their mode of occurrence, be considered as parasites on certain subterranean portions of the material of massive eruptions, which still possess a high temperature and are kept in a liquid state by the molecular combination with water which finds access to them."

Richthofen then goes on to show that this mode of origin of volcanoes is only a repetition on a smaller scale of the manner in which massive eruptions themselves originated. Volcanoes bear the same relation to massive eruptions which the latter do to the material forming the primeval interior of the globe. What is this material, and what its relation to the rocks which we call volcanic? These are questions which we have to endeavor to answer.

We must first try to ascertain what volcanic rocks really are. All are familiar with the distinction between igneous and sedimentary rocks, that is, between rocks which have once been in a molten state and which have come to the surface or been deposited through the action of igneous causes, and those which have been deposited by water. Most persons also understand the term "metamorphic" as used by geologists, meaning that the rocks embraced under that term are not what they once were; that they have suffered certain chemical changes since their deposition, in the course of which the mass has undergone a rearrangement of its particles, so as to have assumed a crystalline texture, separate and distinct minerals segregating out of what was before an amorphous mass in which no particular crystallized minerals could be discerned. Hence, the metamorphic rocks are often called the crystalline rocks. This distinction of rocks into igneous, sedimentary, and metamorphic is, of course, more or less arbitrary. For instance, showers of pumice-stone and ashes may be, and often have been, thrown from a volcano, and the eruptive material falling into water will then have assumed a stratified condition as it sank

to the bottom, just as any mud or sand would do. The strata thus formed, having been raised above the water, or while still beneath it, may have undergone chemical changes, or become metamorphic in character, so that the mass now partakes of the character of all three classes.

The formation of sedimentary rocks implies evidently the pre-existence of some other rock on the earth's surface as the source of the material of which they are formed. Igneous rocks, on the other hand, must have come from beneath the surface, where they have existed from all time, as we may suppose. Believing in common with almost all geologists, that the earth has cooled from a condition of intense ignition, we of course recognize the fact that there was a time when all existing rocks were of igneous formation,—the consolidated crust of the earth was an igneous formation. All the material of the sedimentary rocks must have come from this source; but it may have gone through several cycles of change. Igneous rock has been ground to powder and deposited in water; this material has been again broken up and again deposited; and no one can say that this process may not in some regions have been repeated a good many times.

It becomes important, then, that some criterion should be established by which the eruptive rocks may be distinguished from the other classes. That knowledge of this kind is needed will be apparent when we consider that the conclusions we have to draw in regard to the dynamical agencies employed in getting the rocks into their present condition and position must depend to a large extent on the origin of those rocks. For instance, if we consider a certain crystalline mass forming the axis of a chain of mountains as an eruptive rock, our conclusions in regard to the structure of that chain will be very different from what they would be if we considered the same material as simply a sedimentary rock which has assumed a crystalline texture from the effects of metamorphic action.

Here, then, we come upon another of the difficulties or discrepancies of opinion among geologists, who, starting from the theory of the original igneous fluidity of the earth, begin almost at once to diverge in their paths towards the goal they wish to attain, which is nothing more nor less than

the solution of the great problems of dynamical geology. With regard to the rocks which have come to the surface from beneath during the tertiary epoch, and which we call volcanic, there is but little difference of opinion. We see them now issuing from volcanic vents, and to those products of massive eruptions which precisely resemble in texture and composition the ejections of existing volcanoes, we do not hesitate to assign a similar origin. There are, however, many varieties of rocks, occurring in great masses, and belonging to the older epochs, which were formerly almost universally considered to be eruptive, and in regard to the real nature of which there is now considerable discussion among geologists. These are the rocks of the granitic and porphyritic families. Granite and syenite are the predominating types of the granitic, and quartzose porphyry of the porphyritic family. These are the ancient eruptive, or ancient volcanic, rocks in the opinion of many; while others look upon them as having been originally sedimentary, and as having assumed their present crystalline texture through the influence of chemical changes,—in short, they are not eruptive, but metamorphic. By those who adopt the metamorphic origin of granite and porphyry the argillaceous slates are supposed to have furnished the material for the first-named of these, and the sandstones for the other. If this view were correct, we should, as advocates of the gradual consolidation of the globe from a condition of igneous fusion, be placed in a difficult position, for we should have to show how it was that, in a gradually cooling globe, eruptive material was not brought to the surface in large quantity until the latest epochs, when, as would naturally be supposed, the crust of the earth having become greatly thickened and the interior sensibly cooled, eruptive action would have diminished instead of having increased. To avoid this difficulty, some of the chemical geologists—and of those who maintain the metamorphic origin of granite such are indeed the only consistent ones—deny altogether the existence of any primeval eruptive rock. To them all visible rocks are either sedimentary, or they have been such; and what are ordinarily called volcanic and eruptive masses are nothing but sedimentary deposits which have been softened or liquefied by the internal heat, and thus enabled to

flow as lava. The idea of these geologists seems to be, that the series of changes has been going on so long on the earth's surface that no portion of the original crust can, by any possibility, remain visible. It is a pushing to its extremest limits of the favorite theory of Lyell, that no traces of a beginning are to be found ; or, at least, that the beginning is to be put back as far as possible, and that all geological phenomena are to be interpreted with that one idea in view, the result being that some facts have been extraordinarily distorted and others overlooked, for the purpose of making things pleasant in that direction. Such persons as wish to make it appear that no proofs of a beginning can be found in geological facts must go still further, and deny that the earth has ever been in a condition of igneous fluidity, from which it has been gradually cooling through all the geological ages. They are trying to pull out the corner-stone from under the fabric of the science.

It can be clearly shown, as it seems to us, not only that the volcanic rocks are not softened or metamorphosed sedimentary materials, but that the same is true of the rocks of the granitic and porphyritic families ; these are, in fact, samples of the primeval crust of the earth, such as it was before any sedimentary rocks had been formed. In order to get at some of the proofs of this, it will be necessary to consider, for a moment, the mineralogical composition of the different families of the eruptive rocks ; these are all almost exclusively aggregates of silicious minerals, including among them silica itself or quartz. Several different kinds of feldspars ; hornblende and augite, two very closely allied minerals ; quartz ; different varieties of mica ; magnetic iron : — these are the substances of which all eruptive rocks, including granite, porphyry, and lava, are almost exclusively made up. Quite a number of other minerals do indeed occur in them, but almost always in very subordinate quantity. The close resemblance in external appearance and actual composition between eruptive rocks from different parts of the world is, indeed, a surprising fact. But it is more surprising still to find that, as shown by the researches of the great chemist Bunsen, the materials of which these rocks are made up are combined in certain definite proportions ; so that if we determine by chemical analysis the

quantity of any one of the ingredients of which a specimen is composed, we can by mathematical calculation arrive very nearly at the amount of each of the others. The "law of Bunsen," as it is called, is of the greatest possible importance in its bearing on the question of the origin of the eruptive rocks. It must be evident to all that this law could not be true if the rocks to which it applies were of metamorphic origin. If that were the case, and they were really derived from the sedimentary deposits, they could not, by any possibility, fail to have the same varying composition which these sediments themselves have, and which can by no means be brought under Bunsen's law.

There is also another fact which has a most important bearing in this connection. It is this: that the order of succession of the volcanic rocks has been the same all over the world; they have not come to the surface in different regions in an indiscriminate manner, but in a certain sequence, or chronological order. This extremely important fact was first brought out by Richthofen, who, by means of his specially good opportunities for the study of this class of rocks, was enabled to recognize and clearly lay down this order of succession, and demonstrate its correctness by examples collected all over the globe. The chronological order of succession, as well as the law of composition of the volcanic rocks, are clearly opposed to the idea that these are the results of the metamorphism of the sedimentary beds. The material of which these volcanic ejections are made up must have come from beneath the shell of sedimentary deposits; and as it everywhere came from beneath this shell in a certain chronological order, so it must ever have previously existed there in the same order. If basalt has always been erupted after andesitic lava, then basalt must have everywhere formed a shell of material underlying andesite in the earth's interior; that is to say, the mass of the earth beneath the shell of sediments is formed, for a certain distance down, of layers of somewhat different material, and these layers are arranged in a similar order all over the world. What is this order? Is it one in which we can find something logical, something which seems to be connected with the nature of the materials themselves? To this question the answer is,

in a general way, affirmative ; but it must be admitted that the processes of volcanism are so complicated that we cannot expect an agreement in all minute details, but only in the general order of events, looking at them in the largest way. It will not do to study up the exceptions to the general rule and make them our standards, as we are likely to do if we confine our observations to any one locality. We are rather to try and get the general principles established, and then endeavor to account for the apparent exceptions in a manner which will be in harmony with the general well-established series of facts. Thus, if it can be shown that over nine tenths of the globe the order of succession of the volcanic rocks is one and the same, then let this fact first be thoroughly demonstrated, and afterwards let the exceptional cases in the remaining tenth be investigated, each on its own merits, in its necessary subordination to the general law.

In something like this spirit the investigations of Richthofen, in regard to the order of succession of the volcanic rocks, must be received. It is not claimed that he has clearly made out their precise sequence in all localities and for all geological epochs ; but that there is a certain order to which they have conformed, over a large portion of the earth, and especially during the tertiary period, can no longer be doubted ; while it seems probable that the exceptions which do occur will be found to be of comparatively slight importance, and that all geologists will have to admit the value of these investigations in their bearing on the difficult questions to which they are applicable.

It certainly seems clear enough that, on the whole, the order in which the volcanic rocks have appeared is one which we ought to have expected, if the theory of a gradually cooling globe be true. The more silicious and, of course, the lighter kinds were the first to be emitted from the interior, and these have been succeeded by denser or more basic ones. This statement is not so peculiarly applicable to the volcanic as it is to all eruptive rocks, beginning with the earliest epochs and including the granitic family. From this point of view it is evident that quartzose and the more highly silicious rocks prevailed almost exclusively during the earlier periods, and that they

have gradually become replaced by the more basic. Granite and syenite were once the predominating eruptive rocks ; in the latest geological ages basalt and andesite have been.

As the development of the earth's history has gone on, the regions of igneous action have become more and more localized and we have now only eruptive materials issuing from craters or isolated orifices ; the days of massive eruptions, or such as took place from fissures of great length, have passed. This is as we should expect ; for, although there are some who follow the school of Lyell so far as to reject everything which looks like more violent action of any kind in the past than at present, yet, unless we admit that igneous forces were more actively at work and more generally disseminated than they now are, we must give up altogether the hypothesis of a gradually cooling globe ; and, with this theory gone, we are entirely afloat, — absolutely destitute of any guide through the mazes of structural geology. We must admit that the crust has been constantly thickening, while the cooling has been going on ; and if this has been the case, the facility with which the molten matter in the interior has found its way to the surface must have been constantly diminishing.

There is a point, in this connection, to which our attention must be for a moment turned. There is a difference between the granitic and the ordinary volcanic rocks, as regards the method in which they have come up from beneath, dependent on their position as portions of the exterior shell of the earth, in consequence of which the former have more of an intrusive and the latter rather an eruptive character. Forming, as it did, the original surface or uppermost layer, granite has often been raised in ridges, before any sedimentary rocks existed through which it must otherwise have been obliged to force its way. There being no resistance from the weight of overlying materials to be overcome, this rock could assume a higher position without having to wait for tension to accumulate so as to form fissures, as has been the case with the more recent eruptive masses, which have had to find or make in some manner a passage through a considerable thickness of the consolidated crust, before they could appear upon the surface.

The real character of granite and the granitic rocks has

been much discussed of late among chemists and geologists, the former adopting usually the metamorphic theory of its origin, the latter, on the other hand, almost all taking the other side. The field geologist sees these rocks occupying a position which it seems impossible that they should have, unless they have been forced upward when in a liquid or plastic condition, and he observes also a great many facts which preclude the idea that this liquidity or plasticity has originated through metamorphic action on sedimentary materials. And in a question of this kind, at present the geological facts must be allowed a greater weight than the chemical, since chemistry has thus far proved to be rather a blind guide to those endeavoring to unriddle the mysterious reactions of the primeval earth. That the peculiar texture of granite, as compared with that of the volcanic rocks proper, does present a difficulty, there is no doubt; but if we consider that this rock, forming as it did the exterior crust, must have been in much closer proximity to the ocean than were the underlying masses, we shall have no difficulty in understanding that a larger amount of water and a lower temperature were conditions which exercised a powerful influence in determining its texture.

There can be no doubt, then, that the seat of volcanic action has gradually receded from the exterior towards the centre, and that in so receding it has descended into regions of denser material, and that these regions have been reached in the same order in different parts of the world, showing that the arrangement of the materials of the crust is everywhere strikingly similar.

We have an important and difficult question to answer in endeavoring to ascertain the nature of the force which brings the material of the molten interior to the surface. This is a subject which has been passed over without discussion by some writers, while others have given it a measure of consideration, usually making it evident by their treatment of it that they felt its difficulties. It used formerly to be supposed that the opening of a fissure in the earth's crust would necessarily cause the molten material below to issue forth without further cause. The insufficiency of this as a reason has been felt by the later writers; but of those discussing the subject hardly any two

have been agreed in their views. Sometimes the differences of opinions thus disclosed are not radical; but usually they are, and in a good many instances we find authors diametrically opposed to each other. In one respect there is a fair amount of agreement among the theorizers on volcanic phenomena. Almost all consider the access of water as essential, in some way or other, to the emission of lava. But in regard to the *modus operandi* of the water and the manner in which it is to find its way down to the volcanic focus, most authors are found to preserve a discreet silence. Mr. David Forbes, whose lectures and writings on these subjects have been much circulated of late in the English magazines, says that all which is required to account for the phenomena of volcanic action is "the assumption that water from the sea should, *by some means or other*, find its way down into the reservoir of molten matter beneath the surface"; what the means are by which the water is to gain access to the interior are not given, nor is the mode in which the water acts after it has reached the depths anywhere explained. Scrope, who was among the first of modern authors to advocate the necessity of water as an agent in volcanic eruptions, solves the difficulty in a most curious manner, namely, by supposing the water to be already present in the material which is to issue forth as lava, and only waiting to be vaporized whenever a transfer of heat into the region takes place. To use the words of that author, "It is now generally recognized that the power which forces up lava from a depth of miles, through narrow and crooked fissures broken across the solid crust of the globe is no other than steam, developed in the interior of the lava by vaporization of water intimately disseminated throughout its substance." Professor Phillips, one of the most cautious of the English writers on geology, in his latest work on Vesuvius, quoted in a previous article, incidentally alludes to water as a cause of "volcanic excitement," as he terms it, but goes no further in that direction.

The eminent chemical geologist, Bischof, is the only author who has gone into anything like an elaborate discussion of the manner in which water might gain access to the molten interior and act as a motive-power in the ejection of the lava. He perceives some of the difficulties in the way of the adoption of

this idea, and endeavors to remove them. It seems pretty clear that steam at its maximum elastic force would not have power enough to raise a column of lava from the region from which it is supposed to come up to the summit of even a moderately high volcano. This difficulty Bischof gets over by supposing that the column of lava has lengths of steam included in it, like the bubbles of air in a barometer tube. This explanation is also adopted by Lyell, who follows Bischof closely in all that relates to the theory of volcanic action. This hypothesis, moreover, clearly involves another difficulty, which is this: that two columns, one of water and the other of lava, must be in communication with the molten mass of the interior of the earth, and yet that the elastic force of the steam generated by that water shall throw out, not the water itself, but the lava. It is believed by some physicists that it may be possible for water to pass through minute fissures, through which it cannot return when converted into steam, although this has not yet been clearly demonstrated. But, even admitting this, it does not appear how it is that the force of the steam is used to lift up the column of lava to a height of ten, fifteen, or even twenty thousand feet above the level at which the water enters, rather than to blow out the fissured and necessarily much weakened thinner portion of the crust through which the water has found its way. This objection is an insurmountable one, in our judgment; and, indeed, the assumption that steam is the *primum mobile* in all volcanic eruptions is one beset with difficulties. No theory of volcanoes can be adopted that will not account for the phenomena of massive eruptions as well as for ejections from crateriform orifices, and this the water theory is obviously incompetent to do. That water comes into play in volcanic eruptions there can be little doubt; but this is in the later stages of the process, when cinders and ashy materials are chiefly ejected. And it is by no means certain that the rain may not be quite as competent as the sea to supply the necessary water. Much stress has been laid on the fact that most volcanoes are near the sea or on islands, as going to prove that eruptive action cannot take place without the presence of sea-water. But it must be recollected that this nearness is, in many cases, only comparative, with reference to the total

breadth of the continent, and not absolute. Thus the volcanoes of the South American Andes are, in many instances, two hundred to three hundred miles from the sea, which is certainly a long distance for action to be transmitted laterally through the intervening rock. Besides, there are not a few regions where, within a recent geological period, if not during the present epoch, volcanic action has taken place on a large scale, at a great distance from the sea, at a high altitude above it, and also far from any inland waters of magnitude, which might be supposed to answer instead of the ocean as feeders to the volcanic excitement. We need only instance, in this connection, the line of volcanoes which extends across our continent through Northern Arizona and New Mexico, of which Mount San Francisco and Mount Taylor are the dominating summits.

Everything indicates that we cannot separate the agencies which give rise to the formation of mountain chains from those which are energetic in volcanic eruptions. Whatever cause is capable of folding the crust of the earth into ridges, or thrusting a portion of it up above the adjacent parts, is also competent, if carried a little further, to produce a fissure, and through this the underlying material, whether it be in a fluid, plastic, or viscous condition, may be forced, by the pressure arising from the subsidence of that portion of the crust which borders it on one side or the other.

We have, therefore, to go back another step and endeavor to ascertain what the forces are which have been active in producing those ridges of the earth's surface which we call mountains. A mountain may result either from a positive elevation of the mass, or from depression of the adjacent region. We leave out of view here those elevations which have their origin simply in denudation or erosion by water of the surrounding surface, for these are easily understood and comparatively unimportant. It is true that we have absolutely no means of ascertaining how much, in the past geological ages, of the elevation of our mountain chains is due to actual upheaval or increase of distance from the centre of the earth, and how much to depression of other portions of the surface. We are accustomed to refer all elevations to the level of the sea as a zero, but we have no reason to suppose that this level has itself

been invariable ; that is to say, it cannot be taken for granted that the distance from the centre of the earth to the sea-level at any particular point on the earth's surface has always remained the same. On the contrary, there is abundant evidence that the sea-basins have deepened since the earlier geological periods ; but of the extent to which the sinking of the sea-level which would thus be produced has been compensated by an increase of the area of the land, we can only form the crudest conjecture. We do not yet know the depth of the deepest portions of the ocean, or where they are situated.

Looking at the surface of the earth simply with reference to continental and oceanic areas, we have reason to believe that the differences of level between them are the result of depression rather than of elevation. The masses which now form the continents have been left where they were, while the ocean beds have sunk and allowed the water to retire from the more elevated portions. This follows, indeed, necessarily, from the nature of the assumed cause of differences of elevation, namely, the shrinkage of the interior, and the endeavors of the crust to adapt itself to the diminished nucleus. If we conceive that the globe, as a whole, shrinks somewhat unevenly, and it is hardly possible to conceive that it should be otherwise, since neither the composition of the cooling body nor its rate of parting with its heat would be likely to be entirely uniform in all its parts, then the region in which positive elevations would be likely to take place would be the borders of the most rapidly shrinking area, or where it joins on to the portion which remains comparatively stationary. These more rapidly shrinking areas would, of course, be the ocean beds, and the stationary area the continental masses, while the edges of the continents would be the region of positive uplift or of mountain formation. This is the basis of Professor Dana's theory of the formation of continents, as set forth by him in the "Geology of the Exploring Expedition" and elsewhere,* and of which a synopsis was given by us in this Review some twenty years ago. The investigations of geologists have, since that time, given additional value and lustre to these lofty generalizations of Professor Dana's, in the opinion of the writer of this article, although it must be ad-

* See references on page 245.

mitted that they have not met with general adoption. Other theories have been suggested and discussed, but without any very definite conclusions having been arrived at; at all events, the conclusions reached have rarely been satisfactory to others than their authors. A great mass of material has been gathered bearing on the structure of mountain chains, or, at least, capable of being made available in that direction; but little has been accomplished in the way of applying this information to the working out of any theory of mountain building. What theories have been suggested have been of the vaguest kind, and, in some instances, facts have been entirely ignored in supporting them.

While believing, with Professor Dana, that mountain-building is, to a large extent at least, the result of an antagonism between subsiding and stationary masses of the earth's crust, we are fully aware this is a somewhat vague way of stating the case, and that a more detailed account of the agencies at work in this operation, and of the methods in which they act, is extremely desirable. But when we come to examine what is known of the detailed structure of the great mountain chains of the world, we find that, in spite of all that geologists have done, our information is exceedingly defective. In the chain of the Alps it is true that we have a great many local sections in the works of Gümbel, Favre, Studer, and especially of the geologists of the Austrian official survey, the Reichsanstalt. But how deficient are our generalized sections across the entire chain! Indeed, there is not one on a large scale from which an idea of the structure of the mass, as a whole, can be obtained. And if this be true for the Alps, how much more is it likely to be so for the great chains of Asia and of America, which, in comparison with the much visited and studied European mountain masses, are almost unknown. Indeed, it is only quite recently that the subdivisions of our own Cordilleras, grand as they are, began to be indicated on our maps or even to receive names. And not even so far as that has our knowledge of the Asiatic chains of mountains reached. Of that vast region north of the main Himalayan range, on which are piled the masses of the Kün-Lün, the Karakorum, and others, we know as yet almost nothing, so far as geological structure is concerned.

Even the sections which the India survey gives of the middle and lower Himalayan ranges are on a small scale and difficult to unriddle. Generalizations in regard to mountain structure at the present time, which profess to go into some detail, must, therefore, be drawn with much caution, and taken rather as indicating the direction in which future and much-needed work may be accomplished, and not as based on anything completed.

Of all mountain forms, the simplest are those which result from denudation. Masses of rock are often left standing, isolated from each other by the removal of the adjacent material through the action of water; and these masses, where the erosion has been extensive and long continued and in suitable strata, are occasionally so large as properly to be called mountains. There are fine examples of the forms resulting from erosion in our Rocky Mountain region and farther west. But erosion on a large scale cannot take place without continental elevation. There must be a rapid inclination of the surface towards the sea to admit of portions of the surface being deeply cut into by the streams which traverse it. Hence the formation of mountains by erosion is rather to be regarded as a secondary operation, and as a sort of carving of an already elevated mass into detached portions which may then bear the name of mountains, which, previous to the erosion, the whole would have been called simply a plateau. The Book Mountains in Colorado are admirable instances, on a grand scale, of this mode of formation.

The next most simple form of mountain building is that in which masses of rock — and it is chiefly the sedimentary formations which are thus acted on — are broken across and tilted up at an angle, from an unequal subsidence of the fractured portions; something as we see happening in the ice covering the surface of a lake when it has been broken up by the waves and then frozen together again, the different pieces being inclined to each other at slight angles, instead of lying all in one plane as before. Such mountains are not usually developed on a large scale, for in almost every case, if there is a fissure formed, there is an outpouring of eruptive material.

If, on the other hand, the group or series of strata, instead

of being broken across and tilted, are gradually bent, then a ridge or protuberance of the surface will be formed, and it will have, of course, various degrees of curvature. A series of such ridges will alternate with relatively depressed regions or valleys, the whole forming a system of foldings which are very likely to be parallel or nearly so, because parallelism in this case merely means a persistence of the bending agencies in one direction. Such a system of parallel ridges or folds may be seen in the Appalachians and the Jura, two perfectly typical regions in this respect. But these may not, by any means, be taken as representatives of all mountain chains, as has been done by Hall and H. D. Rogers. On the contrary, they are only chains of the second or third order of magnitude, so far as elevation is concerned, and in many respects exceptional. They are, so far as we know, the only systems of mountains, having great geographical development, in which there has been no emission of eruptive material from below and no extensive metamorphism.

It seems to be clearly indicated by the results of geological investigations, that the great mountain chains of the world have been blocked out—if the use of such a phrase may be permitted—from the earlier geological times, and often from the earliest. Their structure shows most distinctly that their development has been a gradual one. But it was not always the case that this development was continued down to the latest period. On the contrary, many chains have ceased to grow after attaining a certain elevation; and, having ceased to be influenced by forces acting from beneath, they have ever since been subjected to those erosive agencies which constantly tend to plane down the inequalities of the surface. Hence, the highest chains contain the most recent geological formations. The Himalaya, the Alps, the Andes, the Cordilleras,—these are the great chains of the world, and these are all made up, in part at least, of the newest formations. The Ural, the Scandinavian Mountains, the Appalachians, the Brazilian ranges,—these are examples of mountain chains which have ceased to grow at a comparatively early geological period, and within whose masses no modern rocks can be found.

The results of modern investigations, especially in the Andes

and Cordilleras, are diametrically opposed to the theories of Elie de Beaumont, on which he has spent so much labor, and which he has built up with such care and such an outlay of mathematical calculations. According to the views of this eminent French geologist, the earth in cooling and contracting has developed its mountain ranges along lines which are parts of great circles drawn about the globe in a network of curves developed symmetrically from the points where a solid with regular pentagonal faces included within the earth would touch its surface. It is also a part of De Beaumont's system, that mountain chains having the same direction must be of the same geological age; so that law, order, and crystalline harmony would seem to be clearly established in what would otherwise seem almost a chaos of facts, if these theories should bear the test of close examinations, and found to be applicable all over the globe. So desirable was this, that it is no wonder that many geologists were glad to become converts to these views. One by one they have dropped off, however; and few excepting Frenchmen are now found upholding the theory of the pentagonal network. Many years of labor among mountains of the first rank have convinced us that the real facts are almost exactly in opposition to Elie de Beaumont's views. Instead of its being true that identity of direction in mountain chains implies identity of geological age, one might almost say that just the opposite is true. Certain it is, that the great mountain chains are made up of distinct portions, which have similar directions and very different geological ages. Thus, in the Andes and Cordilleras, we have one grand system of mountains made up of an aggregation of many different parts, each having approximately the same direction, and each of these parts or sections being the result of a series of geological changes which have been going on through all the epochs, from the earliest to the latest.

Take, for instance, the widest portion of the whole belt of mountains which forms the western side of the American continent, or that between the thirty-sixth and fortieth parallels of north latitude. We have here a mass of ranges fully a thousand miles in width, having a certain unity which cannot be disputed, and yet made up of parts which have been growing on to each other ever since the azoic period. For, even at

that earliest geological epoch, the chain of the Rocky Mountains was marked out, and each successive period, down even to the very latest, has seen some additions made to the mass.

In all great and complicated chains of mountains, almost without exception, we find eruptive rocks forming a portion of the mass ; these may be either ancient or modern, or both together. Great chains almost invariably are made up, to a large extent, of granitic rocks ; usually granite itself forms the bulk of the mass. Volcanic overflows may or may not occur ; different chains differ very much in this respect. The granite usually forms the central and higher portion of a great chain ; it is a remarkable exception when this is not the case. In the Alps, while the bulk of the central masses are of a granitic character, there are a few very lofty and almost isolated points or even large domes made up of sedimentary materials, as, for instance, the Matterhorn, and some of the very highest portions of the Bernese Oberland. In the Himalayas the main portions of the higher ranges seem to be granite, but data are extremely deficient for those regions. Eruptive rocks, both of the granitic and volcanic types, are abundantly but very unequally disseminated through the great ranges which make up the Pacific edge of North and South America. The Andes are very largely made up of volcanic materials piled on each other to an immense height ; these appear to predominate over the granitic ; but different portions of the chain are very unequally situated in this respect. The same is true with regard to the North American Cordilleras ; here, vast masses of granitic rocks forming exclusively all the more elevated ranges ; there, volcanic materials covering up all the others, and far exceeding them in quantity.

When the study of orography was in its infancy, it was thought that the typical form of mountain ranges was that of a mass or wedge of granite thrust up from beneath and carrying with it the sedimentary rocks through which it had made its way, which would then be symmetrically disposed upon the central mass, the stratified beds dipping each way from it, and forming what geologists call an *anticlinal axis*. It was found, after more accurate observations began to be made than were customary in the early days of geology, that the

structure of most of the great chains was by no means so simple as this, and, consequently, some hastened to conclude and to state that no such thing had ever occurred at all. Some even went to such an extreme in the opposite direction as to maintain that all mountains had a structure exactly the reverse of the anticlinal, namely, synclinal. Of this theory more presently ; it must be considered in connection with that which makes granite and all the granitic rocks to be of sedimentary origin, and not eruptive, but metamorphic.

Believing, as we do, that granite or some rocks of the granitic family formed the original exterior crust of the earth, it is not difficult for us to understand that these must necessarily form the core of most mountain chains, and that especially it must predominate in those which reached their full development during the earlier geological ages. When the ridging or wrinkling of the crust began to take place, granite, being the uppermost layer, was raised into the highest position, and might be elevated to almost any amount, provided the base on which the protuberance was raised was broad enough. Circumstances, the exact nature of which it would not, in the present state of our knowledge, be easy to state in detail, have differently influenced the different ranges in regard to the point whether the granite crust should be entirely broken through and the underlying more basic rocks be brought to the surface. In the Andes and Cordilleras, everywhere the eruption of the granite has been followed, at some stage of the mountain-building process, by the outpouring of volcanic rocks, beginning with propylite and andesite and ending with basalt. We know too little of the structure of the great South American chain as yet ; but it is certain that modern volcanic rocks form a large portion of it, and that granite lies at the bottom of the whole, although subordinate in quantity, at least through considerable portions of the chain. In North America the granite predominates, on the other hand, and the volcanic, although crowning the range in many places, is, on the whole, much inferior in bulk to the more ancient eruptive masses. This relation is changed, however, as we go north, and in Oregon basaltic lava covers almost the whole of the Cascade Range, and has flowed far and wide over the adjacent country. Striking as is the pre-

dominance of volcanic rocks in the mountain ranges which encircle the Pacific, it is still more extraordinary to find them almost wholly absent in the High Alps, and in the Himalayas so far as yet ascertained, while abundantly exhibited both north and south of these ranges. Thus the vast lava plains of the Dekkan lie to the south of the Himalayas, while to the north extensive volcanic formations are also reported ; but so little is accurately known of that region, that it is hardly possible to say whether there are any traces of active volcanism there. The volcanic formations of Europe lie to the north and south of the Alps, at a considerable distance, as any one may see by consulting a geological map of that country. The best solution which can be offered for this problem of the unequal distribution of volcanic rocks on the two opposite continental masses is, that in Europe-Asia the thickness of the granitic crust was greater than on the American side, so that the underlying volcanic masses could not find their way to the surface through the uplifted protuberance, but only at its edges, where tension was great and the thickness of the granitic layer less than towards the centre of the uplift. That this may have been the case is indicated by the much greater extent of the land mass of the continent of Europe-Asia, the greater absolute height, and the vastly greater breadth of the ranges taken as a whole. When these die out, then the volcanic rocks come in, as to the south of the Caucasus and in the space between that chain and the western extremity of the Himalayan ranges. It is not without a meaning in this connection that, as it appears, the phenomena of absolute elevation have been continued up to a later geological period in the chains bordering the Pacific than in that region which includes the Alps and the Himalayas.

The mechanism by means of which simple upheavals, uplifts, or downthrows of portions of the stratified shell of the globe are accomplished is not difficult to be comprehended. But, to explain the origin of so complicated a series of folds as that exhibited by the Jura and the Appalachians, where there is no central axis of crystalline or eruptive rock, is a more difficult task. Among the theories proposed to that end, that of Professor H. D. Rogers is the wildest and most fantastic. According to this, it was the pulsation of earthquake waves through

the molten interior of the earth which laid the superficial crust in plaits. As this idea has never met with acceptance on the part of any sober-minded worker in geology, it need only be alluded to here. If it had not been elaborated with so much care and brought forward on so many occasions by its author, it would have seemed as if rather intended to be classed with that half-playful hint of Sir John Herschel's, that the heat of the sun is kept up by monstrous organized existences, whose dim outlines are revealed to us in the willow-leaf structure of the surface of our "ruler, fire, light, and life," as Mr. Proctor calls the centre of our planetary system. There is nothing about Professor Rogers's theory which will bear the test of examination. It has not the slightest adaptation to chains which are unlike the Appalachians in structure, and, as already stated, this range and the Jura are quite exceptional in character. From it we get no clue as to how the waves originated; how they were propagated from one side only, as would be required to meet the case of the structure of the Appalachians; how the strata, instead of being shattered in pieces by the rapid pulsations of the internal fluid, were gradually bent in such a manner as could only have been accomplished by very long-continued action; how the corrugated crust was held in place after the passage of the wave. In fact, from whatever side we examine this theory, it presents nothing but difficulties, of which only a few have here been suggested.

Another theory of mountain formation, which was first intended to be applied to the Appalachian chain, but which has since been stretched to fit all mountain ranges, is that of Professor James Hall, which has also been supported by Mr. Sterry Hunt, and by Mr. Vose, in a work entitled "Orographic Geology." This last-named gentleman, who prints "civil engineer" after his name on the title-page of his work, as if he feared that, by some possibility, he should be taken for a geologist, has adopted Mr. Hall's theories *in toto*, which he could more easily do, since he was not hampered by any of those difficulties which have their origin in a personal acquaintance with the subject.

Professor Hall's theory is rather an application or enlargement of the views of Herschel and Babbage in regard to the

manner in which the internal heat of the earth may be supposed to affect regions where deposition or denudation of the strata are taking place. As it is known from observation that the isogeothermal lines, as they are called, that is, the lines of equal temperature beneath the surface of the earth, rise and fall with the elevations and depressions of the surface, so that the underground isothermal surfaces correspond in contour with the external surface. This being the case, if over a certain region there is a deposition of sediment going on, then there must be a rising of the temperature beneath while the isogeothermals are adapting themselves to the new surface. Exactly the opposite will take place in a region from which the material is being abraded. Thus, as erosion and deposition of sediments are always going on, there are always changes of temperature taking place over the earth's surface, by which expansion and contraction of the rocks are effected. This is presumed by Babbage to be an agency of the first importance in producing geological changes, and Herschel also insists upon the increase and relief of pressure in different regions, according as material is deposited or abraded, as also necessarily being one of the mightiest of the causes by which changes in the configuration of the surface are brought about.

These views have been applied by Professor Hall in this way. Deposition of sedimentary materials can only take place continuously and for a long time in a region which is subsiding, as all geologists will readily admit, since detritus must be carried from a higher to a lower region, and if that less elevated area does not subside it will soon be filled up with sediment. Subsidence, however, according to Professor Hall, involves pli- cation or folding of the strata, which must take place when large thicknesses of material are pressed downwards. To use the Professor's own words: "By this process of subsidence, as the lower side becomes gradually curved, there must follow, as a consequence, rents and fractures upon that side; or the diminished width of surface above, caused by this curving below, will produce wrinkles and foldings of the strata." Further on he adds: "But the folding of the strata seems to me a very natural and inevitable consequence of the process of subsidence." The results are, according to this theory, that moun-

tain chains do not occur except where there is a great thickness of sedimentary deposits, and that these become plicated by their own subsidence. Hence plication is characteristic of all mountain chains ; so, also, is metamorphism, for in the subsidence the material has been brought into such relations of position as to cause the isothermal planes to ascend into it, and thus to bring it into such conditions of temperature as to facilitate those chemical changes which result in converting a sedimentary into a metamorphic rock. Hence, also, a synclinal structure and an axis of metamorphic rocks are to be expected in every great mountain chain. But how the mountain chain is obtained from the depressed mass of strata is nowhere explained by the author of the theory in question ; hence it has been aptly characterized by Professor Dana as "a theory for the origin of mountains, with the origin of mountains left out." Indeed, there is no point in which it will stand the test of examination. It admits of mathematical demonstration that the assigned cause would not be sufficient to cause the plication. This can also be made apparent to the eye by drawing a diagram representing a section of a portion of the earth's crust on a natural scale, laying off an area of subsidence with an amount of depression equivalent to the assumed thickness of the stratified rocks, say of the Appalachian chain, and observing the relative length of the lines representing the original surface and that of the depressed mass. The result will be quite conclusive as to the plication of strata from their own subsidence, except where that subsidence is extremely local. Neither is it true that mountain ranges exhibit usually anything like the kind of synclinal structure required by Professor Hall's theory ; indeed, if we can understand what this structure would be most likely to be, there is no such chain anywhere. The theory, as set forth by its author, is left in such a vague form that it seems impossible to bring it to any crucial test, and one has to be content with finding in it nothing which will bear examination.

It must be borne in mind also, in this connection, that neither Babbage nor Herschel were geologists, and that, consequently, their views with regard to the relative importance of different geological agents or conditions are not to be accepted without careful investigation. A little consideration will show that

although there may be something plausible, and even attractive, about these theories of metamorphism and change of relief of the surface in consequence of denudation and the accumulation of sediments, the facts are far from supporting them, at least to anything like the extent assumed by Professor Hall. If the earth's crust is so sensitive to pressure that it is ready to respond to the very gradual and comparatively slight difference of level resulting from abrasion of the rock at one locality and removal of the detritus thus formed to another, how is it that the weight of the great mountain masses is supported, or how could they have originated at all? It is not possible to conceive that, during all the preceding stages of the earth's existence, its interior should be so insensible to the pressure of the crust as to allow ranges like the Alps, the Andes, and the Himalayas to be built upon it, and that, at the present epoch, it has, all at once, assumed such a condition of sensitiveness as to respond by its motion to any transference of weight from one region to another. It would not be difficult to suggest other valid reasons for refusing to accept Herschel's views; but enough has been said to indicate clearly that they are not admissible as a basis for orographic generalizations. The ideas of Babbage in regard to the rise of the isogeothermal planes in consequence of the accumulation of sediments are more philosophical than those of Herschel; but the facts do not bear us out in inferring that extensive metamorphism will necessarily be the result of the resulting increase of temperature. An examination of a section of stratified rocks piled upon each other to a height of several thousand feet, resting horizontally on the granite, and quite unaltered as to texture since deposition, is sufficient evidence that heavy accumulations of sediment are not necessarily rendered crystalline by the rise of the isogeothermal planes; but that something else is required to bring about that complex series of chemical changes which we designate by the term "metamorphic action." Such sections as those alluded to here may be seen in abundance over a wide area in the Rocky Mountains, and along the Colorado and its tributaries, as well as elsewhere. Indeed, the Appalachians and the Juras themselves show that great masses of rock may be piled up, and even extensively plicated, with but little resulting metamorphism.

The gist of Professor Hall's theory seems to be, that mountains are logically connected with large deposits of sedimentary rocks ; and this is true, but exactly in the opposite way from that imagined by him. The sedimentary beds are thick because the mountains pre-existed from the destruction of which they could be formed ; not that, having been already formed, they were afterwards made into mountains. There can be no formation of detrital or sedimentary deposits, that is, of stratified rocks, without the previous existence of some higher region from which the material can be derived. Hence, if the combined thickness of the sedimentary beds about a great mountain centre reaches a high figure, it is simply because the conditions for the accumulation of such beds have been favorable. With a surface entirely flat, the amount of deposition must necessarily be very small and almost entirely confined to such materials as are produced by chemical or organic action. But those beds which are chemically precipitated or formed by living organisms are vastly inferior in thickness to those which result from the piling up of detrital materials, or such as are abraded from previously existing rocks through the agency of water.

It is evident that, in theorizing in regard to mountain-making and deposition of sediments, too little regard has been had to the origin of these sediments. The fact is ignored that all the sedimentary formations must have been originally derived from the original crust of the earth as it existed after cooling had gone so far that water had begun to condense upon its surface ; they must have had some higher region from which to be swept downwards. These higher regions were, in the first place, evidently the ridges or wrinkles of the granitic and gneissoid crust raised above the general level by the first efforts of the consolidated crust to adapt itself to the interior. The detritus thus carried down the flanks of the ridges was, early in the geological history of the earth, mostly deposited in the ocean, which must originally have covered even a larger portion of our surface than it now does. Hence the predominance, or almost exclusive existence, of marine formations, during the earlier geological ages. It was not until a large body of sedimentary deposits had thus been formed, and these masses had begun to be themselves raised above the sea-level, that their

abrasion could furnish material for a set of beds not derived from the original crust. And this process having once been gone through, the same thing may have been repeated again and again. How many times such a destruction of pre-existing sediments and formations of new deposits from the ruins may have taken place in any one region, we cannot say; but we have no reason for assuming that all over the world this has gone on to such an extent that none of the original crust can be anywhere visible.

The area of the continental masses gradually and constantly expanding, and the depth of the oceanic basins increasing, strata formed by fluviatile action began to be deposited, and of course contained the remains of fresh-water and land animals. If, then, no new axis of elevation was originated, and there was no further rise of the land, the formation of new stratified deposits would eventually reach its limit, because the newly formed beds would have risen to the level of the highest existing land, and, equilibrium of the surface having been restored, there could be no more erosion, except on the smallest scale. Thus, in many mountain chains, as already noticed, there has been a cessation of growth at an early period; while in others — and these are the great chains of the world — growth has continued down even to the very latest epoch. In these instances of continued growth there has usually been a tendency to the formation of a new axis or uplift parallel with the earlier one, and at no great distance from it, on one side or the other. Thus opportunity has been given for the processes of abrasion and reconstruction of strata, and the mountain mass has developed itself, until we have, as the final result, a series of approximately parallel ranges, showing in their structure the complicated nature of the processes by which they have been formed.

This method of growth by lateral aggregation is most admirably exemplified in the Cordilleras of North America. In this complex of chains, we have, first, the granitic and gneissic nucleus or basis, which is the floor on which all the stratified formations have been laid down, and from whose ruins the bulk of the materials have come for building up the ranges. This ancient nucleus is, in places, low down and concealed by heavy

masses of stratified formations; in other regions raised into lofty crests, possibly the highest of the whole series. The stratified deposits, which have been formed from this nucleus, have been, from time to time, folded, upheaved, and invaded by eruptive rocks, whose distribution, however, has been very irregular.

On the western or oceanic side the disturbances have been most extensive. Here the upturnings and crushings of the strata have taken place on the grandest scale, and new axes of elevation have been formed at successive geological epochs, the close of the Jurassic and of the Miocene tertiary being two of the most important of these. On the eastern or Rocky Mountain side no great folding or metamorphism of the rocks occurred after the close of the Azoic period; but a gradual elevation of the whole mass of strata took place, the larger portion of which was during the Tertiary epoch. By this uplift the unaltered cretaceous rocks were raised to an elevation in places greater than ten thousand feet above the present sea-level. This rise of the land continued until the most recent geological times, or almost down to the present day; but how much of the difference in elevation between the land and sea is due to actual positive uplift, and how much to a sinking of the ocean, we have at present scarcely any means of judging. At all events there were, on this side of the Cordilleras, almost no local disturbances or foldings of the sedimentary rocks, which still lie upon each other in regular sequence, dipping at a low angle from the central crystalline masses everywhere, except just at the line of junction of the two formations, where, for a distance of a few thousand feet at right angles to their trend, the stratified formations, from Silurian to Carboniferous, are turned up on edge in the most wonderful manner, and sometimes completely overthrown, so as to dip towards the mountains, but not metamorphosed or rendered crystalline in structure. Neither were these disturbances attended, to any considerable extent, by outbursts of volcanic or eruptive material; while on the western side of the continent these occurred on the grandest scale.

An examination of all that has been published with regard to the geology of the Andes indicates that when this mighty

chain of mountains comes to be thoroughly studied, there will be many analogies discovered between them and the North American Cordilleras. Some such could already be indicated if space permitted ; but, as yet, no careful section has ever been made across the South American ranges by any trained stratigraphical geologist.

In the case of the Appalachians, we have to do with a chain of mountains which has no crystalline centre or axis, and which consists, at least through a great portion of its length, of a pile of detrital materials, distinctly stratified, all belonging to the Palæozoic epoch, scantily provided with fossils, but separable into a number of well-marked groups by the aid of lithological characters. These groups have much their greatest development towards the northeast and southwest, and they dip in general towards the west or northwest, so that in going in that direction we rise on to more recent strata. Proceeding westerly, moreover, we find the plications, which are well marked on the eastern edge of the chain, gradually disappearing ; while at the same time the groups of strata are found to be made up of finer materials and to be gradually thinning out, thus indicating a greater distance from the source from which the detritus of which they are made up was derived. Hence we can hardly fail to draw the inference that this source was somewhere to the east of the range, and that the region from which the plicating force proceeded is also to be sought for on that side. If this be the case, then it seems probable that there must have been a high range of crystalline rocks on the eastern borders of the Appalachians, for there is no other conceivable source of supply which would satisfy the required conditions. The detritus of which the rocks of this range are made up came then from a higher region, which has since disappeared. It must have subsided, and this subsidence was, as we conceive, the cause of the plication of the beds which had been formed on its western slopes, these beds having been elevated and crumpled or flexed as the mass exterior to them was gradually sinking.

Subsidence, then, we regard as the chief cause of the plication of strata ; but it is not the sinking of the stratified mass itself which is the principal effective agent in bringing about

its folding. There can be no plication, to any appreciable extent, without an actual shortening of the plicated strata, and this can only come from a lateral thrust, such as would be exerted by a subsiding mass upon a region exterior to it. Hence if we find the newer strata on the flanks of an older central nucleus compressed together by folding, we are justified in presuming that it is the subsidence of the latter which has given rise to the plication of the adjacent lower region. If the subsiding higher area be of comparatively large dimensions, there will be a tendency to produce elevation to a certain extent on each side.

The folding of the newer strata along the base of the Alps, and of the Jura even, has repeatedly been explained by successive upheavals of the Alpine masses; indeed, these have been taken for granted by most geologists, without any attempt to investigate the manner in which the assumed cause could bring about any such result. It is certainly clear enough that elevation of the central mass would produce a lengthening rather than a shortening of the base on which rest the strata which are uplifted, and that this is something quite the opposite of what is required to cause plication. From a careful study of the stratigraphical geology of the Sub-Himalayan ranges, Mr. Medlicott, of the India Survey, was led to the conclusion that the peculiar position of the rocks of which those mountains are made up could only be accounted for on the theory of a subsidence of the central mass, and the same idea has been applied by him to explain the contortions of the tertiary beds on the flanks of the Alps, as well as to plications of stratified rocks in general.* And so far as this geologist has developed his ideas on this subject, they are identical with those formed by us in studying the mountain systems of North America.

We have thus endeavored to give an idea of the progress making by geologists in getting towards a solution of some of the principal problems of orography. The subject is a very comprehensive and difficult one, and it is far from easy to treat it in a popular manner. It is evident that much remains to be done in this line of research, and that it is desirable

* See *Quarterly Journal of the Geological Society of London*, XXIV. 34.

that chemists and physicists should lend a helping hand ; but the burden of the work must fall on the geologists, and one important step will have been made when it is clearly recognized that geological facts must be allowed to have more weight than chemical theories, and that a large experience in the field is a necessary prerequisite to valuable theorizing.

J. D. WHITNEY.

ART. II.—THE REGENERATION OF ITALY.

To think of Italy is a habit which we contract very early in life. Many school-boys know more about Rome than about the capital of their native land. But there is no great harm in this partiality for the classical world ; and pedagogues rarely object to it on moral or patriotic grounds, though they may have to urge against it the daily increasing claims of the exact sciences and the shortness of life. If the ideal world of our boyhood has Rome and Athens for capitals, are we not better off than our sisters whose world revolves round Paris, with occasional nutations towards Jerusalem ?

Not only do we owe much to the Latin races of the Italian peninsula themselves, but even the subtler and remoter influences of Grecian culture have reached us mainly through the medium of the Latin world which outlived both the Grecian and the Byzantine world. It stretches across the gloom and confusion of the Middle Ages with a majestic continuity, not broken by defeats or by invasions. With new gods and a new language, it was still Latin in the thirteenth century, and its decrepitude led to nothing worse than to its *renaissance*. Nay more, the Empire that was officially reported dead in 1806 had still the pretension of being, somehow, the Roman Empire, and, until 1870, the so-called Catholic world has never ceased to have its secular capital in Rome. In fact, a more imposing case of historical continuity could not be found, except in the annals of Egypt and of China.

That the hard-working sons of the North should look fondly and longingly on the Italian peninsula, on all that is in it and

on it, and on all that ever sprang from its rich and venerable soil, requires no apology or explanation. It is a consequence, nay, a test, of culture. And we cannot wonder that the time and money spent on pilgrimages to this holy land defy statistical computation, and that the literature on Italy, on its monuments and gallerics, its scenery and its climate, its beggars and its brigands, is the largest that any literary specialty can boast of.

But all this literary labor, all this æsthetic worship, was bestowed on modern Italy only because and in so far as it was the "country of the dead." It reached its maximum precisely when the Italian people had reached a state of *vita minima*, and must have been, therefore, essentially retrospective. It related to the past, or to what was purely external and therefore dead, in the present,—to scenery, to customs, or to costumes, rather than to those who wore them. And these subjects, rich though they are, cannot pretend to be inexhaustible. The public, in fact, seems wellnigh tired of them ; and among the countrymen of the author of "Mignon's Song," where Italolatry had reached its very highest development, a faint yet unmistakable reaction against it began to show itself as early as 1840, when the king of Prussia, a most undemonstrative man, grew warm over Nicolaï's "Italian Journey," a sarcastic libel, whose author was royally rewarded for his moral courage and independence of judgment. About the same time Lessing, the painter, prided himself on his never having visited Italy, and his authority was great enough to make this omission a rule for the artists of the Düsseldorf school and a test for admission to its sanctuary. Perhaps English Pre-Raphaelitism was another of these crotchets, since it can hardly be explained except on such purely psychological grounds.

Thus the world seemed to hint that it had had enough of Italy, that Italy was "fair but dead," and that she had given us and taught us all she had to give or to teach. And yet it would have been easy to see that this fair Italy, which had "lain so still," was not altogether motionless. She sat like a good model, but any tolerable observer might have noticed the twitching of her limbs and the frown that occasionally disturbed her pose. To call her dead was, indeed, a poor diagnosis. Artists and

sight-seers might have been pardoned for seeing only what they wished to see ; but that historians and politicians (other than French) should ever have committed the same mistake may well seem strange to us now. As early, in fact, as 1821, fully fifty years ago, these political sextons, on visiting the mortuary chamber, might have heard

“The ghosts
Thrill through ruined aisle and arch,
Throb along the frescoed wall,
Whisper an oath by that divine
They left in picture, book, and stone,
That Italy [was] not dead at all.” *

And, surely, the ghosts which haunted Italy in 1821, and which have continued to haunt it until 1848, were men of flesh and blood, and, what is more important, men of energy, of perseverance, and of remarkable single-mindedness. The fact that the origin and the history of the Carbonari remain to this day wrapped in comparative darkness is sufficient to show the character and the temper of these men.

The great accomplished fact which we now recognize in an “independent, free, united Italy,” is a complex fact which could only be accomplished through the co-operation, conscious or unconscious, willing or unwilling, of several agencies. Three principal things had to be done,—the foreign ruler had to be expelled, the thrones of the petty autocrats had to be upset, and the idea of Italian nationality had to assert itself against local municipalism on one side, and against Papal cosmopolitanism on the other. Only when all this was accomplished could Italy aspire to be more than a geographical notion. The first of these tasks was obviously soldiers’ work : without a war or wars, a new Italy was impossible. But the second task could be done only gradually : in theory, at least, the establishment of civic liberty had to be preceded by the de-thronement or conversion of the tyrants, and the conspirator and the demagogue had to clear the way for the politician and the statesman. As to the third part of the national programme, it is evident that it had to be left to the exclusive care of public opinion, provided this opinion could, in its turn,

* Elizabeth Barrett Browning, “Poems before Congress.”

be properly influenced by the school and the press. It would be well, in speaking of Italian affairs, not to mix up and to confound these agencies. They were as distinct from each other as the aspirations they served to realize ; and from their distinctness, and from nothing else, springs the otherwise unintelligible division of the Italian parties. The logical *prius* of the whole programme was the national idea itself. Whatever was incompatible with it had to be removed. Foreign dominion, tyranny, municipalism, and the Papacy were the common enemies of all Italian patriots. The liberal parties never disagreed on that ; but they disagreed on the means to be employed, and more particularly on the *order* in which they were to be employed. As long as the idea alone had to be regarded (Platonically, as it were), there was but one national and liberal party in Italy, arrayed against the rulers and their naturally, the priest-ridden multitude.

The national idea pre-existed. The Italians are fond of deriving it from the great fountain-head of their literature ; but whether Dante was the creator and inventor of the idea or merely its first revealer, it would be difficult to decide. All we know is that, before Dante, the Italian peninsula had no common language beyond the priestly Latin, and that Dante, in his treatise on the *Volgare Eloquio*, was the first to protest against the existing anarchy of local dialects and to raise his own dialect to the rank and dignity of a national Italian language. This fact must not be underrated. Many political problems are nothing but problems of classification ; and if mankind is to be rationally classified and divided into autonomous groups, some, at least, of the characteristic properties common to the members of each group should not be shared by any other group. Among these characteristics, community of language, combined with geographical continuity and compactness, must always hold the first rank. As long as Austria had Cisalpine and Italian-speaking provinces, the group called Italy was only rudimentary. Again, each of the Italian states was a member of another and larger group, the great Imperial commonwealth, held together by an apparently stronger tie, community of faith. And as long as this faith was genuine and strong, the national idea, being founded on a physical fact, did not and

could not assert itself against something presumptively divine. Such an assertion of nationalism against Catholicism, of the narrower against the wider principle, could only be thought of when the sins of the Papacy had deprived Catholicism of its divine character almost entirely, and had changed the Church into what Italian wit has called *la santa bottega*. Then Pope and Emperor became two party cries, and the happy congruence of Church and Empire having been destroyed, the work of disintegration and of national reconstruction had virtually begun. Very naturally, therefore, the national idea found its first, albeit faint, expression in the great Ghibelline poet. Dante's political merit, however, lies not so much in the many anti-Guelphic passages of his *Divina Commedia*, as in his having written a poem of such length and such beauty in the Tuscan *volgare*, which had never been used for literary purposes, and not in Latin, which was the official and literary language of the Empire. It is said that — as a matter of course — Dante began writing his *Commedia* in respectable Latin hexameters, and that he changed his plan only after long hesitation. The innovation was, at all events, a bold one in those days of scholastic and curial Latinity, not to speak of the linguistic and grammatical difficulties the poet must have had in moulding and handling such a raw material.

We know how quickly Dante's example was followed by other writers, both in verse and in prose. A literature sprang up intelligible and accessible, not only to a single district or province, but to all the inhabitants of Italy, and which showed the important fact that there was such a thing as an Italian language distinct from the Latin, distinct from the local dialects, and yet confined to the Cisalpine peninsula. And given a common language and a common country, the rest will take care of itself.

It would, however, be a gross exaggeration to say that the development of a national idea in Italy has steadily continued through five centuries, or that it had to grow so long before it could begin budding and bearing fruit. That Dante was the first to throw out its seed, and that he created for it the fertile soil of Italian literature, is incontestably true ; but it is equally true that we very soon lose sight of the seedling amid the his-

torical confusion and rank depravity of the ensuing centuries. The history of those centuries knows nothing of an Italian nationality. The very term seems unknown or forgotten throughout Italy. Only foreigners used it. To them, in fact, Italy was always one ; but it was always the Italy of Italian literature or the Italy of Roman history. In either case it was the land of the dead, the Italy without the Italians ; while the Italians themselves knew each other and knew themselves only as Tuscans, Romans, Neapolitans. Where, then, was “the Italy of the Italians”?

Evidently, the spark of the national idea could never have been extinguished. It must have continued smouldering in some dark corner, to which the light of history had no access. Or it must have been tended and fanned by some sectarian priesthood, which had good reasons for keeping it secret, or which, being a secret order already, saw in this idea a new bond and a fit shibboleth. Any pre-existing association of malcontents, or of persons whose interests were divorced from those of the ruling powers, must have been willing to become the guardian of the sacred fire ; and such associations were numerous enough in the Middle Ages. The Masonic lodges were probably too cosmopolitan in their principles to become the vehicle of any national idea. But the *guilds*, although low and narrow in their aspirations, although selfish and exclusive in their mutual relations, could rise to the level to which the cosmopolitan Freemason could not have stooped. These guilds had a life of their own, with many by-laws and time-honored institutions, which made them a kind of state within the state. And as, in the darker ages, the monasteries had been places of refuge for science and literature, so the guilds were considered to be towers of stability and emblems of civic respectability in an age of political knight-errantry, when the so-called state was little more than the ephemeral resultant of restlessly competing iniquities and treacheries. The nineteenth century may boast of having produced the great International Society, but trades-unions and the principle of co-operation are nothing but clever plagiaries from the pages of mediæval history.

The chronic feeling of estrangement, and the habitual opposition of the guilds against the powers of the state, must have

predisposed these otherwise conservative bodies to become, theoretically at least, subversive and revolutionary. Towards the end of the last century, in fact, they had become so conscious of their power, that they hardly knew what to do with it. Their old enemy, feudalism, was dying if not dead ; and, like all institutions outliving their primitive scope, they threatened to become mischievous in their aimlessness. Thus, in default of a better occupation, they became instruments of power and of intrigue in the hands of the ruling princes. In Naples they sold their influential support to the king for some additional privileges or monopolies, and were looked upon as a power whose sanction or acquiescence had to be courted. They maintained their legal status until the beginning of this century, when Lord Bentinck found it necessary to dissolve the *maestranze* in Sicily ; and the spirit of free trade, which was always strong in Italy, seems to have done the same work elsewhere. The modern *camorra*, which flourished in Naples until 1860, and whose support King Ferdinand II. is supposed to have courted by becoming its partner or shareholder, was nothing but a monstrous caricature of a guild. It was a permanent conspiracy of tradesmen and market people, a long strike for higher prices, which successfully defied the laws of demand and supply. When the king had farmed out the customs to the highest bidder, the men of the *camorra* established custom-houses of their own, levying taxes at random and almost ruining their official rival, but insuring perfect impunity by paying a good dividend to the king. The noxious spirit of the *camorra* still lives in most Italian markets, and where it is rampant nobody dares undersell his neighbor. It comes in fits and starts, but, while it lasts, prices remain sublimely independent of the so-called laws of economy.

We need not follow up this subject any further. Suffice it to say that there was a time in the history of the Italian *maestranze*, when these corporations, having lost their primitive aim and meaning, seemed to crave a new one. Their robust organization then became like a body longing for a soul. If but a soul could be breathed into them, even Lord Bentinck's edict was powerless to kill their body.

There are many who believe that the Society of the Carbonari

had nothing to do with the *maestranze*, and it is beyond our power to decide the question. At all events, their organization was the same, and their slang and their passwords were those of real woodmen and real charcoal-burners. Italy was the "forest" in which they had to ply their trade. It was divided into districts or provinces, each district comprising a certain number of stations or "huts," called *baracca*, where the Carbonari held their meetings or "sales," called *vendita*. The order was divided into four grades, of which the first only was easily obtainable, all further promotion being extremely difficult. Comparatively few were admitted to the honors of the second grade, whose members called themselves the Pythagoreans; and how rapidly the mysteries as well as the difficulties increased in this career may be judged from the circumstance that nothing is known concerning the third grade beyond the bare fact of its existence. As to the fourth, the very existence of such a grade was uncertain and remains so to this day. The often-avowed object of the Carbonari was to "free the forest from the *wolves*" which invested it. And these wolves, being dangerous animals, not likely to be charmed away by a song like Horace's wolf or to be caught in an open *battue*, these woodmen had to lie in ambush and to resort to the only weapon at their disposal, conspiracy; the secrecy having the additional advantage of spreading a halo of romance around them, which proved irresistible to many young enthusiasts. In 1814 a fusion seems to have taken place between the Carbonari and the *Calderari*, or "tinkers," one of the Sicilian *maestranze* dissolved by Bentinck; and when a new wolf in the person of King Joachim had invaded the Italian "forest," the Carbonari could muster a force of nearly thirty thousand.

Now, the metaphorical term "wolf" could have but two possible meanings. Italy was to be delivered from "foreigners," and it was to be delivered from its home-born "tyrants." Yet it must have been difficult to separate these two meanings at a time when the foreigners in Italy were also its tyrants, and when its home-born tyrants were the foreigners' vassals. A certain confusion in the political cries (or whispers) of the conspirators was excusable under such circumstances, especially when we consider that this whole chapter of European his-

tory, from the first French Revolution to the outbreak of the revolutionary epidemic of 1848, is characterized by a certain wildness and craziness, contrasting strangely with the tame-ness of private life and the clearness of modern thought. The French Revolution had been social rather than political. The nobility had been put down by the *bourgeoisie*. But in Italy, where the different classes of society had always been on ex-cellent terms, and where the upper classes were even more tyrannized over than the lower classes, the cry for liberty was always a purely political cry, not of one class against another, but of the whole people against the sovereigns whose thrones were upheld by Swiss guards, by secret treaties with Austria, and by the spread, through priestly influence, of ignorance and corruption. How could one discriminate, under such circumstances, between constitutional liberty and national independence? The one seemed to imply the other. Theoretically the former is an internal, the other an international, affair. But had it been clear to the conspirators that liberty could only be gained through, and together with, national independence, and that the latter task exceeded the power and competency of a secret society, passive despair would have been the inevitable result. It was fortunate for Italy that her champions were incapable of such strict reasoning, and that they persisted in their sublimely illogical line of action.

Ferdinand IV. of Naples was both a tyrant and, as a Bourbon, a foreigner. Joseph Napoleon was neither a tyrant nor, as a Corsican, a foreigner. Murat, though a born Frenchman, was not only a benevolent ruler, but he was the first ruler in Italy that ever seriously entertained the idea of a united independent Italy. And for the sake of this idea he, the husband of Napoleon's sister, was ready to break with his great brother-in-law and to conspire with England and Austria against him. If Bentinck snubbed him and Austria betrayed him, so much the worse for Bentinck and for Austria. The friends of Italy ought to have found no fault with him. Yet what did the Carbonari on this occasion? They negotiated with King Ferdinand, who was waiting at Palermo, and promised him their assistance against the French invader. It may have mattered little which way they sided. Murat was doomed. But what a strange infatuation!

The terrible days of the Restoration came. Europe, having got rid of Napoleon and the Napoleonides, had the felicity of seeing the Pope again in Rome and the *ancien régime* restored in France. The darkness and the stillness of the night might have lulled even the Carbonari to sleep. But it seems that they were far from feeling tired, as the remainder of Europe undoubtedly was; and, notwithstanding the severe measures taken against the secret societies by the ungrateful king of Naples, the Carbonari gained strength so rapidly and spread so widely that, in 1820, they numbered upwards of half a million and had established stations in every part of the Italian peninsula. They became the more formidable, as they now contained the *élite* of Italian society in their ranks. Many of the most illustrious names of Italian history figure on their muster-rolls; and, although they repudiated all distinctions of rank, except those belonging to their own hierarchy, their institution was naturally more attractive to those who could appreciate the unseen honors and arduous duties of a conspirator's career. They went, unfortunately, too far in their refinement, neglecting altogether the purely muscular element, without which neither battle nor street fight can be fought. Instead of rousing or gaining over the multitude, they fancied they could establish democracy without any co-operation of the unwashed people. It is surprising that the revolutionary risings of 1821 could be organized at all with such materials. That they ended in total failure was natural enough.

Ten years later the attempts were renewed. Once more the revolutionary contagion had spread from France to Italy. But France, instead of supporting the cause of liberty, as the Italians had expected her to do, sent an army of occupation to Ancona, to correct the mischief produced by her example. It was on that occasion that the Carbonaro Louis Napoleon addressed a letter to Pope Gregory, urging him, in the name of young Italy, to renounce his temporal power. Considering that the writer was the future defender of the temporal Papacy, and that the person addressed was the organizer of the *sanfedistic* guerillas, those bands of truculent ruffians who were scourging his temporal dominions "in the name of the throne and the altar," the young Carbonaro's request seems strange and hardly credible.

But it shows, as so many other things do, that the *baracca* was no high school of politics, and that if the regeneration of Italy required some political wisdom, it was not likely ever to come from that quarter.

In fact, soon after 1831, we lose sight of the Carbonari altogether. Not that they had ceased to exist, but they were reduced in number, their leaders being either exiled or in prison, and the lower ranks being thinned by defection. They had grown ten years older, without having recruited themselves by younger elements, and the time was, on the whole, unfavorable for generous impulses and heroic action. It was a time for political quackery rather. Everybody rode his own hobby and hatched his own system; and this individualism, dogmatic though it was, lacked even the warmth of fanaticism. Many Carbonari returned to their homes to resume their long-neglected professions and careers. In Piedmont, especially, they formed a nucleus of liberal, but moderate men, whose presence may well be considered as one of the causes of the early development of constitutional liberty in the Subalpine kingdom. Everywhere else the voice of "young Italy" was most effectually hushed. Great liberties were granted by the cunning rulers to the lower orders of society, which gratefully accepted *panem et circenses*, and were never molested by the police. Robberies and murders were but rarely punished, and certainly never published, to the delight of sentimental foreigners, who thought that the inhabitants of this milk-and-honey land could commit no crimes. The unlimited supply of *circenses* seems to have bribed even part of the better classes, all those, at least, whose levity and worldliness were greater than their patriotism and their sense of justice. It is useless to deny that these were many, and the Italian rulers knew how easy it was to make of Italy a fools' paradise. The stranger who had the good fortune of visiting Italy before 1848 found nothing there but sweetness and beauty. What of the dirt and the rags, the crime and the ignorance? When painted or sung, they were all beautiful and sweet.

And yet those sixteen years of what looked like order and happiness were in reality years of untold suffering. All those who longed for something better than balls and banquets, con-

certs and illuminations, operas and masquerades, and all those whose intellectual aspirations went much beyond the primer and the breviary, were jealously watched by the secret police, and, sooner or later, marked "dangerous." To read forbidden books or newspapers was, in fact, far more dangerous in those days than to pick a Grand Duke's pocket. All the rigor of the law, all the most cruel vexations of the police, were reserved for the political sinners, *in actu* or *in posse*. With them the prisons were filled and overfilled, and what the dungeons would not hold was exiled, while the official careers were open only to corrupt flunkies or to idiotic foreigners. But who could count the curses that were muttered in half-deserted homes by those whose fathers, husbands, and brothers were lingering in loathsome dungeons, or gaining a scanty livelihood in Geneva, Brussels, or London !

The magnitude and intensity of these latent miseries can be measured by nothing better than by the magnitude and intensity of the joy produced by the first word of mercy which the new Pontiff spoke in 1846. The enthusiasm and gratitude with which his amnesty was greeted seemed to know no bounds. The successor of the detested monk became at once the most popular sovereign in Europe, and in 1847 Rome had become the very head-quarters of Italian liberalism, to the disgust and horror of the Italian princes. There was but one among these princes who felt neither disgust nor horror, but who publicly thanked the Almighty for having given Pius IX. to Italy, and that prince was Charles Albert, king of Sardinia. The others all frowned and trembled.

The question here arises, Was this really a satisfactory state of things ? and did the Italian Liberals make the most of their new opportunities ?

The cry *Viva l'Italia* was raised by a Pope, and this expresses and sums up the whole anomaly of the situation of 1847. What is a liberal Pope ? what a national Pope ? We might as well ask, What is an angular circle or a round polygon ? The thing is a nonentity, which could start into existence only by the evanescence of either of its attributes. The man Giovanni Mastai might give a rational expression to his feelings of justice and of mercy by proclaiming an amnesty ;

but the Pope-King Pius IX. could not become the champion of constitutional liberty without implicitly destroying the mystic dualism of his sovereignty. The Liberals, of course, were only too happy to accept the concessions granted *motu proprio* by the Pope ; but even before the Constitution was granted, the legislative power had slipped from his hands. The *Circolo Romano*, the liberal club of Rome, had become the real sovereign of the Papal states. And with the constitutional *régime* began at once that very logical process of disintegration which led in a few months to an almost complete secularization of the Papal government. The immovable, infallible demigod could sign no laws but those countersigned by fallible ministers and passed by fleeting majorities of erring sinners.

Again, the cry *Viva l' Italia* implied a programme of foreign policy. He who raised the cry was bound to accept and to carry out the implied programme. If the cry meant anything, it meant war against the Austrians, who not only were masters of Lombardy and Venetia, but who had been in the habit of invading the Romagna whenever they thought it necessary to stamp out some revolutionary sparks. Of course the Pope could do but little with his army, but the Liberals expected him to join the other sovereigns in a national league to fight the good fight of Italian independence.

It was an awkward position for the future author of the *Syllabus*, and we cannot be surprised to find him in March, 1848, making the first feeble attempt at backing out of it. The bold schemes of Charles Albert, and the reluctant yet yielding co-operation of the Tuscan and Neapolitan governments, frightened and alarmed him. "I wanted them to pull together with me," he said, "but now they run away with me, and both horses and carriage will come to grief."

To the sovereign people who gathered almost daily under his windows, either to serenade him or to extort new concessions, he said from his balcony that he could go no further. "I cannot, I must not, I will not," were his words. And to a regiment of dragoons that had made up their minds to join the Piedmontese army in Lombardy, and who came to the Quirinal for the Pope's blessing, Pius IX., rather cleverly, said : "My blessings will follow you as far as the Po." If they invaded

Austrian territory, the Pope could wash his hands in innocence.

In the mean time, the Papal government was becoming more secular every day. One *monsignore* after the other was ousted by the popular will and replaced by a popular tribune. Only the chief Secretary of State remained in red stockings ; and as this functionary had always been the foreign secretary of the Papal See, the foreign diplomatists felt a certain *embarras de richesse* at having to deal with two foreign secretaries, one a cardinal, the other a count, who seized every opportunity for contradicting, disavowing, and accusing each other.

The Pope, in his ever-increasing helplessness and bewilderment, seeing that his duplicity could not make up for his lost dualism of power, and that he was held responsible for the doings of his dragoons, notwithstanding the topographic limitations of his blessing, and not daring to break with the people and to fall back on the only power that might have saved him, the power of the Jesuits, accepted, at last, the services of a very able man, who seemed to combine the reputation of a Liberal with the firmness of a genuine conservative. Pellegrino Rossi offered to save the sinking ship and to stop its leaks ; but, unfortunately, his plugs did not fit. His notions of Italian unity were limited to the thrones. He wished to bring about a league of Italian princes, but the fusion of the peoples into one nation certainly did not form part of his programme. Rossi was a cold, haughty politician, who had felt at home in Calvinistic Geneva and in *doctrinaire* France, who had learnt to believe in Royer-Collard's *humanité sagement mutilée*, but who could not grasp the Italian idea, and who retarded its realization by attempting an impossibility,— its reconciliation with the Papacy.

The Pope again failed to see this. So did the Jesuits, who were looking on from behind the scenes, and who ought to have recognized in Rossi a useful though unwilling instrument. Rossi was stabbed in November, stabbed in broad daylight, and in the presence of hundreds of National Guards, on the grand staircase leading to the hall of the Roman Assembly, where he was going to propound his scheme of an Italian League. Whether the Jesuits or the Radicals had hired the

bravo is not known. But the event created neither sensation nor regret nor indignation, and the assassin was neither caught nor sought for. With Rossi fell the Pope's last support; and unable to stand alone or to face the revolution, he fled to Gaeta.

It must be admitted that the Italian Liberals, whose support had proved so fatal to the Pope, had also been doing their best to ruin their own cause. Having succeeded in establishing constitutional liberty, not only in Piedmont and in Rome, but also in Tuscany and in Naples (and perhaps it was necessary to attend to this first, in order to secure that military co-operation which men like Ferdinand and Leopold would never have dreamt of granting without parliamentary pressure); having forced the Bourbon king to send General Pepe with fifteen thousand Neapolitan troops to Venetia; having induced the Austrian Grand Duke of Tuscany to send six thousand men against the troops of his Imperial cousin, to whose support he owed the long security of his throne; having smuggled even the half-blessed Papal dragoons across the Po; and having found in the Sardinian king a powerful, and, above all, a loyal and devoted leader incapable of betraying the good cause,—the Italian Liberals might, one would think, have contented themselves with these unexpected results. They might have subordinated, for a time at least, the political question of reconstruction to the far more pressing national question of independence, and might have accepted even Rossi's Italian League, not as a first instalment, perhaps, of the national programme, but as a parliamentary toy or safety-valve, until the war of independence was brought to an end.

But they had no statesmen among their leaders. Moreover, the flight of the Pope and of the Grand Duke gave these leaders two most tempting fields for democratic experiments, which absorbed the attention and the energies of the whole party during the winter of 1848–49. Mazzini could think of nothing but Rome (where he was made Dictator), and Guerrazzi of nothing but Tuscany; while the two fugitive princes were conspiring at Gaeta, not only with their host, but with the Catholic diplomacy assembled there, and while Charles Albert was left alone to fight Austria as well as he could.

It is true he had not been successful in his first campaign ; but that ought to have been an additional reason for not leaving him alone when, nothing daunted, he tried his strength once more in the spring of 1849. His now reduced programme was the creation of a North Italian kingdom under the Sardinian crown, which was to comprise the Sardinian states, Lombardy, and Venetia, and which was to have Milan for its capital. Some strategists say that this second campaign might, and ought to, have been successful. It ended, however, with strange and inexplicable rapidity. The battle of Novara was lost, and the king abdicated his crown on the very battle-field.

The secret history of this campaign is a curious one, and deserves to be more widely known than it is. Here it may suffice to say that it was no merit of Radetzki's if Charles Albert was not victorious at Novara. The unfortunate king had worse enemies to contend with than the Austrians. While the storm was gathering round Novara, the Sardinian parliament amused itself with discussing the "fusion" of the not yet conquered Lombardo-Venetian with the Sardinian states,—an irrelevant question, which unfortunately involved the transfer of the seat of government from Turin to Milan. Innumerable private interests were compromised. The war had lasted longer than the patriotic ardor of the people, thus rudely put to a test. Tuscany and Rome had withdrawn from it ; and while each province seemed absorbed in its own affairs, the national sentiment became fainter and weaker, and municipal selfishness could raise its ominous head once more. There were three parties in the Sardinian parliament more or less interested in the king's defeat : the Jesuits, because they were anxiously waiting for the era of reaction, which was sure to begin with the Austrian victory ; the Liberals, because they began feeling proud of the achievements of their brethren in Tuscany and in Rome, and hoped more from Guerrazzi and Mazzini than from the Sardinian king ; and above all, the Turinese municipalists, who owned houses in Turin, but not in Milan, and whose brothers and cousins were in the camp. These parties disliked each other too much to form a coalition, and that explains, perhaps, the passing of the ministerial bill sanctioning the "fusion," and making Milan the capital of the new North

Italian kingdom. On the same evening, however, an avalanche of letters from Turin fell on the king's camp, and from that hour a disorderly, mutinous spirit manifested itself in the army, first among the officers, and later among the soldiers. Confusion prevailed both in councils and in action, and competent critics maintain that it was this confusion, and nothing else, which rendered defeat possible. The ill-concealed eagerness for peace evinced afterwards by the whole parliament helped, of course, to aggravate the conditions of peace, which would have been moderate, since Austria, having other work on hand, was anxious to come to terms with Piedmont.

This is a dark page of Italian history, but it is an important one, since it contains the germs of many hatreds which, ten years later, poisoned and imbibited Italian politics, and which have been strangely misinterpreted by foreigners who, taking the legitimacy of these hatreds for granted, sought their causes in present circumstances, instead of looking for them in the past.

Stranger still than the defeat of Novara was the downfall of the Roman Republic, which seemed to be thriving under its Triumvirate. The vain and would-be liberal Pope, who had burned his fingers while playing with the revolutionary fire, had run away to fetch the firemen. The Roman republicans, who really wished to do him no harm, sent three deputations to Gaeta, beseeching him not to be afraid and to return to Rome. Nay, it was only after the failure of these attempts that the Republic was officially proclaimed in Rome. But the Pope had, long since, changed his political faith, and the lost shepherd had returned to the flock that was henceforth to lead him. One of this flock, Cardinal Ferretti, the same who used to review the National Guard on St. Peter's Square, and to encourage them with patriotic harangues, had during his exile at Gaeta come to the conclusion "that Papal government was impossible without despotism and Jesuitism." Why, then, have it at all? he might have asked himself, if he had not been a cardinal. But all who cared to listen were told that the hour of retribution was at hand; that the Pope, having failed with his blessings, would now try his hand at thundering and cursing, and that Rome could hope for nothing else. The only question at Gaeta

was, which wind was to waft this thunder-cloud to the Seven Hills.

To crush a republic seemed a fit task for Austrians or Spaniards or even for a French Bourbon. But France happened to be a republic, a republic, too, with a flaming red constitution, the fifth and fifty-fourth articles of which enacted that the republican principle was to be respected both at home and abroad as a sacred and inviolable principle. There is nothing like a constitution !

Nevertheless, the republican soldiers of France were shipped off to Civita Vecchia in April, 1849. All along the road to Rome they found copies of that fifth paragraph of their constitution fastened on trees and milestones. But what have French soldiers to do with the constitution ? And on they marched, to the Eternal City,— was it towards or against it ?

The Romans, having seen a liberal Pope, might have believed in such a monster as a clerical republic.

Chi vuol vedere il diavol vero
Metta il rosso accanto al nero.

They had no right to be sceptical in those days of wonders ; yet sceptical they were. They went to meet their French guests and fraternized with the soldiers, who appreciated their excellent cigars. It was a midday dream and a very short one. In a few weeks Rome was besieged and almost blockaded. The French dug trenches, the Romans erected barricades. The French sent shot and shell into the Eternal City (very cautiously, it must be admitted), and in the evening their discordant bands struck up the Papal Hymn ; while inside the wall, within earshot of them, the Roman band responded with the Marseillaise ! Such were the political Saturnalia of 1849.

On the 3d of July Rome was taken by the French, and a few weeks later Venice was reoccupied by the Austrians. The Italian revolution was at an end. The constitutional *régime* was put down in Naples, in Rome, in Tuscany and the Duchies, and Lombardo-Venetia was restored to what Austrian generals called “order and legality.” Only in Piedmont the flame of constitutional liberty, though flickering and unsteady, was watched and fed by the faithful hand of a young king who had

sworn on the battle-field of Novara to make Italy both independent and free. During the ten years' night which followed, that flickering light was Italy's only hope and only beacon. It could be seen as far as Sicily, as far as Venice. But who would venture out again in such a night?

The spirit of the age which had manifested itself in Papal liberalism and in republican clericalism appeared insane. But if these two manifestations of its insanity had proved fatal to the Italian cause, the champions of this cause, being themselves under the same deranging influences, had unwittingly co-operated with its adversaries. "Union is strength," is an old saw; and the Italian Liberals might have known that Italy, in 1848, had no strength of her own beyond what was derivable from union. But instead of dwelling fearlessly on their weakness with a view of changing it into strength, they listened, in their colossal ignorance, to Gioberti's conceited doctrine of "Italian primacy," which the Abbé's eloquence had rendered dangerously popular throughout Italy. Every people is prone to think that it is Jehovah's chosen people, but few can bear the consciousness of such a distinction. If Gioberti had preached to his countrymen that they were the most ignorant, helpless, and vicious people in Christendom, his rhetoric might have done some practical good. But by telling them that they were the first people on earth, the natural "primates" and leaders of nations, and that through them the Divine revelation would come to the modern world, as it had come to the ancients through the Jews, he practically retarded the work of Italian regeneration. No wonder the people shouted, "Evviva Gioberti." But when the Abbé had become Charles Albert's Prime Minister these shouts soon ceased, because, from his new position, he had discovered that the light of divine revelation could reach Italy only through small apertures, and that its broken rays *interfered* with each other in a most perplexing manner, producing rings of ominous darkness. He would have been very glad then to stop the Tuscan aperture altogether, and he actually sent a corps of observation to the Tuscan frontier, ready to put down Guerrazzi's republic at a moment's notice.

Mazzini, too, had his crotchets, though he never recanted. He, the lawyer, had no hesitation in accepting the Roman dicta-

torship, but to the far more useful leadership of a warrior king he objected on the theoretical ground that no good could ever come from royalty. And lastly, Charles Albert himself had committed the mistake of speaking in the name of Italy before having ascertained her willingness to co-operate with him. *L'Italia farà da se* was his motto. Italy, no doubt, re-echoed it, but each province thought, "I am Italy."

The Italians, however, soon found leisure for reflection. The healthy though limited sphere of parliamentary life which Piedmont kept open proved an excellent school for Italian politicians, and in a few years the old clouds which had obfuscated so many nobles' minds were dispelled. Light was at last thrown upon the past, the actual and the possible. And the clear intellect and serene temper of Cavour lit up and prepared the way which was to lead to the deliverance of Italy in 1859.

He began by doing away with Charles Albert's *farà da se*. He knew that Italy could do nothing by herself. Nay, it seems that the republican Liberals had, by this time, come to the same conclusion. Both looked out for an ally. And, strange to say, both went to knock at the same door. Cavour put Napoleon under obligations by his co-operation in the Crimea, and Orsini reminded the Imperial Carbonaro of his old yet ever binding oath of allegiance to the Italian cause. It matters little whether or not Orsini's bomb did much to insure the Emperor's co-operation; but that Orsini's party had thought it necessary to make such an attempt showed, apart from all moral consideration, that they agreed with Cavour in subordinating the revolutionizing of Italy to the impending struggle with Austria, in other words, that they were willing to obtain liberty through independence, instead of first putting on the Phrygian cap and then waiting for the apple of independence to fall ripe into their open mouths.

Napoleon came and did that wonderful deed of international "altruism" for which we find no precedent or parallel in history. He fought for the independence of a neighbor; and he did so in spite of the political superstition of his statesmen, who thought that France could be powerful and great only while her neighbors remained weak and divided. Yet, after all, Napoleon was a tyrant, an avowed enemy of constitutional

liberty. He was the cruel perpetrator of the *coup d'état*, and the protector of the Papal government with all its horrors and iniquities. That the Italian Liberals had self-control enough to ignore this, and were ready to fight by his side, nay, under his flag (for he, not Victor Emanuel, was the supreme commander in Lombardy), was a proof of political maturity and betrayed a more intelligent patriotism on their part. At the moment when Garibaldi went to join the king and the Emperor in the field, the fate of Italy was virtually decided.

It was only after the premature and untoward peace of Villafranca that the parties resumed their old hostilities. The Liberals thought themselves again betrayed, not this time by Turinese municipalism, but by diplomacy and kingcraft,—forgetting that the king himself had been betrayed. Proud of what they had achieved under Garibaldi, and what they might have achieved if conspiring royalty had not thwarted them, they called themselves once more the republican party, and gathered round Garibaldi as an opposition centre or second focus. The king, with creditable tact, accepted his new position, which was daily becoming more eccentric, and Cavour utilized it by conniving at Garibaldi's Sicilian expedition, which was a real cat's-paw to him. But when it came to the siege of Gaeta, Garibaldi saw how powerless he was with all his glory. Victor Emanuel then came to his rescue, shook hands with him, and once more the "red shirts" fought side by side with the soldiers of Piedmont.

What, then, were the grievances of the republican party in 1860? The Italian princes had all abandoned their thrones. Their states remained free and irresponsible masters of their destiny. If they declared in favor of "annexation to the Sardinian monarchy," all parties, unless they objected to the competence of a plebiscite, which they did not, were bound to abide by the result. There being no tyrants, the cry of "liberty" could no longer be a party cry. The question of priority, too, had been practically decided, since Italy had obtained or rather *received* both liberty and independence at the same time, through the same agency, and from the same quarter.

When the union of Italy under the Constitution of 1848 had been proclaimed by the nation itself, a rational opposition to

the new order of things could be made only on two grounds. The boon having come partly from Piedmont and partly through Piedmont, from France, French influence and Piedmontese methods became the two things obnoxious to party criticism. Without being a republican, any Italian patriot might have felt justly anxious not to see the newly bought independence reduced to a mere exchange of foreign influences. And all local patriots or municipal egotists, whether republican or royalist, might have justly resisted the somewhat levelling tendencies of the annexationists, whose *modus operandi*, more logical than historical, consisted in "Piedmontizing" Italy.

Thus a respectable opposition party might have been formed, instead of a cantankerous clique. Had not the king's eldest daughter married a Napoleon? And had not Cavour sold Nice and Savoy for Italian independence? A cheap bargain, yet a bargain. Moreover, Napoleon III. had curious plans and doctrines concerning Italy. Like Pellegrino Rossi, he wanted an Italian confederation, not a united Italy, and one of his most cherished ideas was the quadrature of the Italian circle, the "reconciliation of the Papacy with new Italy." It is known that he used a certain pressure in favor of his confederation scheme; but that pressure was slight. It just satisfied his *doctrinaire* conscience, without affecting the march of events. Not so with his "conciliation" hobby, which he rode so hard that it threatened to become a war-horse looking defiant and insulting.

Under these circumstances, it was natural enough that the Italian opposition constituted itself as a *party of action*, whose efforts were to be directed against the French occupation of Rome. It was also natural that the same party became a *party of decentralization*, resisting any excess of Piedmontizing. These programmes were perfectly intelligible. But that this party should have wasted its opposition power on the *form of government* is not intelligible at all, considering that the king was scrupulously constitutional, that the Constitution was as liberal as that of Belgium or of Norway, and that, at that time, Venice was still held by the Austrians and Rome by the French.

To talk about the form or name of the government, under such

circumstances, was childish. But unfortunately, the self-styled party of action was in reality a party of *passion*. All the passions, private and political, of Italy had enlisted in its ranks. Its main springs were resentment, jealousy, and suspicion, to which may be added a firm faith in Mazzini and a fanatical worship for Garibaldi. Mazzini, living in exile, had gradually lost his knowledge of Italian actualities ; and Garibaldi, a man of more heart than judgment, never had much of that knowledge. The tactics of a party led by such leaders can easily be imagined. They led to Garibaldi's wound, to his imprisonment, and, through this, to a general recrudescence of party rancor.

The situation was still further aggravated by the September Convention of 1864. Napoleon, still riding his conciliation hobby, wished to accustom the lion and the tiger to live in the same cage, without the keeper's presence. He withdrew his troops from Rome, while the Italian government, by going from Turin to Florence, pledged itself not to go to Rome. The move, being expensive, was supposed a sufficient guaranty against its repetition. This convention, unless it was intended to be a *bona fide* settlement of the Roman question, which it was not, was evidently a political mistake, since it revealed and brought home to *all* Italians, what only a small party had hitherto cared to remember, their ignominious dependence upon France. Of course, the party of action was soon astir again, but their stupid rising only brought back the French, and ended in the chassepot "miracle" of Mentana.

Unlike the liberal parties of other countries, the Italian republicans had never opposed the maintenance of a strong standing army. On the contrary, though always voting against new taxes, they never voted against any new expenditure. The very name of a "party of action" implied a standing reproach against the government for not spending enough. And of this the government was rather glad. Yet, what was the use of spending and of arming any longer ? In the seven years from 1859 to 1865 Italy had spent upwards of two thousand millions of francs on military preparations. Year after year had passed away without any action, and everybody not belonging to the party of action knew that Italy could not, with any chance of

success, attack either Austria in Venice or France in Rome. Only the party of action, believing in the invincibility of Garibaldi, were ready to attack both France and Austria at the same time ; and the Venetians and the Romans did their utmost, by daily demonstrations, to keep alive the sympathy of these men and to furnish them with plausible pleas for the urgency of their senseless war schemes. The art of making political demonstrations, which has always been well cultivated in Italy, seemed to have reached its highest degree of perfection in Rome and in Venice. The Romans, for instance, by taking their evening stroll either on the Pincio or outside the Porta Pia or on the Forum, conveyed three different meanings to their tyrants, who seemed to possess the key to this cipher, but never heeded its meaning ; while the eloquence of the Venetians consisted chiefly in hiding or hoisting tricolor flags, and in *not* going to the theatres. It was a time of demonstrations rather than of action, and the conviction was daily gaining ground that Italy required consolidation rather than extension. Financial and administrative reforms claimed the attention of the Italian Chambers, and, in the beginning of 1866, Rome and Venice were so completely given up, that nothing less than a thorough disarmament was contemplated. It was, however, only contemplated. For, in May, Italy became Prussia's ally against Austria, and, notwithstanding her two defeats, obtained Venetia. If, four years later, through another Prussian war, the Empire fell and with it the Roman apple, ripe and ready for eating, might it not be said that good luck and good diplomacy did for Italy what her party of action had either failed to do or despaired of doing ?

Feeling rather than seeing their own superfluity, the champions of action might have withdrawn from the political arena or modified their programme after 1866. That they did the reverse of this, that their opposition became, just then, more bitter and more violent than ever before, might have proved to foreigners, what in the eyes of most Italians required no further proof, that the original patriotism of these men had become distorted, if not effaced, by personal hatreds and by a vicious indulgence in indiscriminating and unreasonable suspicion. They hated the government for having been more

successful than they ; they despised it for having been more lucky. They hated, above all, the old Piedmontese politicians (whom they called *Consorti*), because they were known to be in the king's favor ; but they also disliked the Tuscans, because they were supposed capable of representing only local interests in Parliament. Not that they believed in the old bugbear of municipalism, which was not only dead but apparently transformed into its opposite, as though the Italian cities had formed a mutual-admiration company. But *regionalism*, as it was called (or provincialism as it might be called, if the term *provincia* did not mean a subdivision of the *regione*), was the new spectre of the day. Curiously enough, Neapolitans, Romagnoles, or Lombards were never taunted with "regionalism," even when they were advocating local interests, while Tuscans and Piedmontese were always treated as if they had to show cause why they should not be suspected of "regionalism."

Under the influence of such sentiments, the tone and the usefulness of the Italian Parliament sank lower and lower, until it reached its maximum of degradation in 1869. The parliamentary history of that year is one mass of revolting intrigues and tedious personalities. The press, having no light of its own, became a mirror, a distorting rather than reflecting mirror, of these hideous realities ; and the democratic papers, especially those of Milan, Florence, and Naples, vied with each other in mendacity, vulgarity, and calumny. Respectable men were accused of swindling, letters were stolen, sold, and brought forward in Parliament by the purchasers ; and all this being in vain, one of the band, whom it would be blasphemy to qualify as republicans, inflicted some sham wounds on himself in the street, to throw suspicion on his adversaries. The causes of all this fuss and noise need not be mentioned, since they had nothing to do with politics.

The storm of a ministerial crisis cleared at last the air of all this foulness. The Lanza Cabinet succeeded the Menabrea Cabinet. Both belonged to the same party, nay, to the same clique. Both were leading members of the *Consorteria*. Lanza was fully as royalistic in sentiment and fully as Piedmontese in his methods as his predecessor, Menabrea, his only advantage

consisting in his being less intimate with the king. Yet the change was necessary, were it only to amuse and to gratify the republican party, who thus had an opportunity of showing that they could make up for their numerical weakness and want of principles by their dexterity in forming ephemeral coalitions, whenever the majority was not absolutely unanimous. Thus Lanza owed his portfolio to the republican vote. But nothing could show more clearly how destitute of party principles the republicans were, than their acceptance of Rattazzi's leadership. When Italian republicans choose Lanza as a Premier, and Rattazzi as a leader, their flag becomes, to say the least, a sham, and we cannot but pay a tribute of respect to those few who, under these circumstances, had the honesty to secede from the "party of the Left" and to form a party of the "extreme Left," or a radical party.

The new elections of 1870 have opened a new era in Italian politics. We find, it is true, the same leaders in the new Parliament, but the reshuffling has cleared away some chaff, and has led to a more natural grouping of parties. The present opposition is, on the whole, calm and dignified, and so is the tone of its newspapers, whose freedom has never been interfered with, and whose spontaneous recovery of self-control has furnished a most welcome proof of the self-adjusting and self-correcting capacities of modern society. The men of the Left are still the *purissimi*, but they seem to admit that a man may be a *homo purus* (at least) without belonging to their party; and if they still have any poisoned arrows in their quivers, they know that they need not spend them. That they are still capable, however, of indulging in jealousies and suspicions, they have shown quite recently by their parliamentary tactics with reference to the Public Security Bill and to the transfer of the capital to Rome.

Early in 1871 the people and the press of the Romagna complained of a sudden, an alarming increase of public insecurity in their province. They could bear a good deal of it, and had always borne it so well that one might have thought they liked it. But brigandage, murder, and extortion of ransoms had far exceeded the average to which they were accustomed; and when the wealthy Bolognese found that they could not go

home to their villas in the evening without being assaulted or carried off to the mountains, the Italian Parliament was at last petitioned to grant those unfortunate provinces the tardy benefit of some exceptional and restrictive legislation. The want was urgent; immediate help was implored. But the government dared not act. It screened itself behind a committee of inquiry, and what with inquiries, committees, and sub-committees, four months elapsed before the *purissimi*, who as vestals of the sacred fire of liberty made a great uproar on hearing that the inalienable rights of freeborn scoundrels were in danger of being tampered with. The bill proposed by the committee authorized the government to condemn persons of suspicious character to the *domicilio coatto*, a kind of police surveillance, obliging the moral patient to be at home at certain hours of the day and the night; but it also forbade and rendered punishable the carrying of daggers, revolvers, and other arms. This latter enactment, applying to all citizens alike, did not sin against democratic principles, but it was, and not unjustly, objected to by many respectable people, especially by judges, magistrates, and jurymen, who never like to walk alone in the dark, and who thought that this law would disarm only those who ought to be armed, and leave armed those who ought to be disarmed. But the first part of the bill excited the fears and suspicions of the gentlemen of the Left, who, not having country houses near Bologna or Ravenna, could see in this law nothing but "a dangerous weapon, enabling the government to make a *coup d'état* at any time." Never had the brigands of the Romagna a finer harvest than during these long debates. The bill passed at last; but the opposition raised against it was highly characteristic.

The question of transferring the seat of government to Rome gave rise to similar suspicions on the part of the Left. They had seen the king's troops open a breach in the walls of Rome. Rome had been officially proclaimed capital. The ministers were packing their archives. The day of departure had been fixed and publicly announced. Yet they knew better. It was all sham and foul play, they said, and unless they forced the government, it would never go to Rome. Knowing that

Parliament had some urgent matters to debate, and that the ministers were anxious to get through these débates before the first of July, the men of the Left, suspecting that this implied the intention of proroguing Parliament, and that such a prorogation might enable the ministers to prorogue their departure for Rome, bethought themselves of leaving Florence *en masse*, thereby rendering a *quorum* in the already thinned ranks of the legislature quite impossible. It is true, they came back in a few days, yielding to a flood of telegraphic appeals and promises. But the stratagem and its motives are worth remembering.

From all this we must conclude that the present party of the Left is a party of suspicion rather than of opposition, of diffidence and fear rather than of criticism. And yet Italy wants and craves nothing more than a good opposition party. Not only is such a party essential for parliamentary life in general, but the Italians want it more particularly as a corrective for some of their national foibles, for their indifference, their want of perseverance, their liability to ennui, and, above all, their timidity. Their men of opposition should, therefore, be men of firmness, of courage, and of strong convictions. But if the gulf between two parties is widened too much, if fanatics and one-idea men are arrayed against scoffers and sceptics, or if the contrast is annulled, if international diffidence is combated by interpersonal diffidence, the health of the body politic must suffer, in the long run.

Italy has many flaws to mend, many sins to atone for. There is no lack of material for criticism and opposition. But the one thing that cannot be complained of, and which yet seems to be the principal grievance of the Left, is *lack of liberty*. The people, at any rate, do not complain of it, their only grievance being the taxes imposed upon them by their own deputies; and when their majesties are invited to manifest their sovereign will at the polls, they think it a bore and stay at home. Perhaps this indifference is an additional reason why there should be a restless radical party to keep the people astir. But the men of such a party would be in justice bound to complain, not of a lack of liberty, but of the lamentable want of public spirit among their own constituents. Foreigners

are strangely apt to take part with the wrong side in Italy. They seem to think it a kind of mental relaxation to change their political creed during a vacation tour to Florence, Rome, or Naples. Thus people who are tories at home or "royalists to the backbone," become republican *dilettanti* in Italy, and seem quite unable to see that, in Italy, the scale of liberty is altogether an octave higher than elsewhere, that Victor Emanuel would be called a true democrat in London as well as in New York, and that of all European sovereigns he is probably the only one that could not easily be spared at this moment.

The spirit of the Italian laws is the spirit of liberty. Alone among the Latin races of Europe, the Italians have shown that they have faith in liberty, and that they can walk on the waters in which others have sunk and perished. This faith, which is confidence in the ultimate goodness and in the recuperative powers of human nature, and absolute allegiance to the dictates of science, manifests itself in almost every law, circular, or manifesto that emanates from the various powers of the Italian state. All restrictive and, still more, all preventive measures are studiously avoided by the authorities and thoroughly hated by the people. As a very instructive instance of this, we may quote the new forest law of Italy. While almost all European governments have hitherto deemed it necessary to put certain restrictions on the right of property in forest land, subordinating these rights to considerations of public utility, the Italian government boldly repudiates all considerations of expediency incompatible with the principles of liberty and of free competition. In France every owner of more than ten hectares of forest is bound to keep at least one quarter of it intact, and in Austria no forest or part of a forest can be touched without the special permission of government. But the Italian minister, in presenting his bill for discussion, expressed his belief that paternal protection had hitherto failed to prevent the gradual destruction of forests in Italy ; that the discovery of new combustibles has reduced, in part at least, the importance of wood ; that if the influence of forests on climate cannot be doubted, opinions still differ as to the noxiousness or utility of that influence ; and that the only

consideration that could justify a certain government control was the danger of inundations. Considering how frequent and how disastrous these inundations have become in Italy ; considering that the Italian rivers are short and rapid, and that of the three hundred and thirty-six thousand square kilometres forming the area of Italy, no less than two hundred and fifty thousand are declivities ; considering, further, that Italy has no coal worth burning, that her engines have to be fed with the refuse of Welsh mines, and that if her firesides are not cold it is certainly not from any lack of cold weather ; — the minister's doctrine, whether true or erroneous, must be admitted to be at least heroic and to betray a firm faith in individualism and in freedom of competition.

In a similar spirit, the Italian government has, from the very beginning of its existence, consistently abstained from meddling with the political elections. The temptation to interfere was great enough, since the passions of those who made use of their franchise, and the apathy of those who did not, conspired to make the first two Italian Parliaments anything but representative assemblies. Some illicit pressure on the part of the government might have acted rather beneficially, by provoking the indolent and rousing the lazy. But these short-sighted French doctrines never found favor with Italian statesmen, who, conscious of the goodness of their cause, could well afford to stand aloof and to take their chance. Perhaps they considered the indifference and non-participation of the ignorant priest-ridden masses as something more valuable than the participation of a few enlightened mediocrities. However this may be, it is a fact that one half only of the five hundred thousand voters, that is to say, only one per cent of the entire population, make any practical use of those political rights for which thousands of patriots have fought and died. The municipal elections suffer still more from this want of public spirit. While the Parisians were shedding their blood for Communal autonomy, the Florentines were informed, one morning, that their communal councillors had been elected, one hardly knows by whom. Gratification seems, indeed, the simplest cure for strong desires. Would that the French knew this as well as the Italians ! Some few Italians feel alarmed at the political

apathy of their countrymen. Others make fun of it: A humorous writer (evidently not learned in physical science) said the other day that the Speaker's bell was often heard to sound *in vacuo*, and that he would give his vote to a bench rather than to a deputy. Another writer goes so far as to recommend the adoption of the Austrian and Prussian system of *double elections*, leaving only the preliminary elections (or the elections of the electors) to the tender mercies of universal suffrage, and subjecting the franchise of the electors to such restrictions as might be deemed necessary in a country where only one person in four can write his name. The idea seems good, many people praise it, but they soon forget it. And the somewhat languid Constitution of Italy is left to get on as well as it can, without any political quackery.

The same faith in liberty and the same rather wanton assumption of individual spontaneity manifests itself in an incipient tendency towards *decentralization*. At present this may be merely a reaction against the centralizing methods by which the first rapid amalgamation of the Italian states was effected, and which might with advantage be acted upon even now; for nothing could have been more beneficial to the various atoms of Italy than that first rude shaking they experienced in the crucible of unification. There is, in fact, nothing absolute in all these doctrines. Local affairs are best managed by those who live on the spot, are best controlled by those who stand in the centre of the state. Knowledge must come from the former, impartiality from the latter. Many a small commune in the remoter part of Italy had to be done away with, that is to say, had to be merged into larger units, merely because they were found to be incapable of making any rational use of their new attributes, from want of public spirit, of intelligence, or of material resources. If in such cases the intelligent initiative and the necessary assistance are not to come from the central government, they must come from some intermediate sub-centre of action. For come they must, no matter whence and how. The whole problem, therefore, resolves itself into the proper establishment of these sub-centres at such distances from the chief-centre on one side, and the municipal units on the other, as will facilitate the gratification of the

selfish desires of the latter and of the national aspirations of the former. Experience has shown that Italian politicians are mischievous only as long as they do not understand the question at issue, and that men who are violent utopists in parliament, became moderate and reasonable pleaders at home, under the sobering influence of local information. Impulsive and imaginative, they require nothing so much as frequent confronting with facts and realities. Therefore it may be said that, in as far as Italy suffers from a want of public spirit, she requires centralization, and in as far as she suffers from any morbid excess of that spirit (which the Italian like to call *parliamentarism*), she requires decentralization. It is absurd to swear by one doctrine and to condemn the other. The downward current and the upward current (of action and of power) must meet somewhere, and many circumstances indicate that the district unit called *regione* is likely to become the ultimate expression of local autonomy and self-government in Italy.

As yet the administrative machine, which we call the civil service, is in bad working order. Made up as it is of several smaller machines hastily and often clumsily put together, it is far too intricate for the prompt transaction of business. Yet, appearances to the contrary notwithstanding, its skeins and knots are not all of red tape. The Italian is not pedantic by nature, nor is he a born bureaucrat. If Italian officials often appear to be both, the impression is due to a kind of awkwardness naturally felt by those who have to work a new machine of bewildering structure. Unfortunately this structure cannot be simplified as long as mutual suspicion or want of mutual confidence renders it necessary that each official should be a controller and self-registering check to his colleagues. The office then becomes a labyrinth of turnstiles, where it is impossible to move on quickly or to back out without creating confusion. When the present Minister of Finance was on the opposition benches, bidding high for a portfolio, he related the history of a certain payment of six francs which had to pass through fourteen stages of official registration. But this is a question of morals rather than of administration.

The *press* is free in Italy, freer certainly than in any other

country of the European Continent. The government has, it is true, the right of stopping the sale of any particular number of a journal ; but it has exercised this right only against some few papers of the lowest type, when they offended common decency. It is, in fact, to be regretted that many other things which outrage decency and public decorum — such as the sale and exhibition of obscene books and photographs — are left entirely unchecked and unpunished. Liberty seems worthy of a better cause ; and even those who admit its great educating powers fail to see why nothing whatever should be done to mitigate the horrors of the public nursery, and to shut out its noises until they have the goodness to cease spontaneously.

It need hardly be mentioned that all professions (including the charlatan's) are absolutely free. Commercial and industrial competition is left to itself. Although the government, in its perennial financial distress, has not been able yet to take any steps towards the abolition of the salt and tobacco monopolies, which pre-existed in all the Italian States, the monopolist principle is understood to be doomed as a relic of a superstitious past. The doctrine of free trade, which was always popular in Tuscany, is now accepted throughout the peninsula, and is as popular in Italy as it is unpopular in France. The Italian tariff is a financial, not a protective arrangement. If we except the manufacture of pottery and chinaware, which was one of the many lost arts of Italy, and which has since been brought to such perfection in England, France, and Germany that its revival in Italy would have been impossible without some temporary protection, we find no other item in the Italian tariff that could be cited as an instance of a purely protective taxation. The tariff is rather high, but home-made articles generally fetch the same prices as the imported ones ; and thus the tradesmen, being too greedy and too short-sighted to undersell the foreigner, while they cannot yet outdo him in skill, lose what little protection they might otherwise derive from high impost duties. Perhaps France, in her new fit of protectionism, may do something to protect Italian manufactures by putting a high duty on Italian raw silk, and thus forcing the Italians to weave their silk at home.

The Italian ideas on *social economy* are extremely tame and

conservative. Socialistic doctrines are either ridiculed or totally ignored by the press. At the last congress of the International Society at Bâle, no country (not excluding Spain) was more feebly represented than Italy. The Italian is a born politician. He is also fond of trading and of usury, and he claims full liberty in all these pursuits. But freedom of speech and of vote, of trade and of competition, means, after all, nothing more than freedom of selfishness or free individualism. Now, the Italian is eminently an individualist, and even his public spirit, if he has any, is apt to assume the form of egotism. Doctrines which command and imply the merging of the individual in the general,—and all socialistic doctrines do this,—appear to him either absurd or unintelligible. Socialism may be called impersonal politics ; and fond though the Italian is of politics, he ceases to care for them when they are stripped of what alone makes them interesting to him,—their personalities.

In the doings of the Parisian Commune, the Italian press could see and point out nothing beyond their criminal character. They need not be blamed too severely for that. But even such innocent, nay useful, socialistic institutions as People's Banks or Popular Credit Banks are ill appreciated and tardily adopted by the Italians ; while Germany (thanks to the persevering efforts of Herr Schultze-Delitzsch) can boast of seventeen hundred and fifty workingmen's credit associations, Signor Luzzatti's efforts have led to the establishment of only forty-five *Istituti di Credito* in Italy, which jointly transact business to the amount of thirty-four millions of francs. Moreover, these *Istituti* are not well managed. The workingmen who are the proprietors and stockholders of these banks think more of politics than of economy. They are always on the scent of political discontent, and wherever they discover that sanctifying condition, whether in Bohemia or in Poland, in Belgium or in France, they send their addresses of sympathy or of encouragement. The usurer's spirit, too, betrays itself occasionally in the doings of these artisan bankers. They issue paper money without having either sufficient credit or a sufficient reserve of authorized currency, and in the books of one of these banks it was found that the amounts of paper money thus issued were carried to

its credit. The managers, of course, pleaded that they had only followed the bad example of the government, which borrowed two hundred millions from the National Bank in 1866, when that bank had little more than a printing-machine to offer. It is, however, only fair to say that while there is about seven millions' worth of fractional paper currency in circulation, not authorized by government, only two cases have hitherto occurred in which the notes were repudiated by the banks that had issued them, the amounts claimed being 10,000 francs in one case, and 200,000 francs in the other. Without disputing the practical and financial usefulness of the *Istituti di Credito* of the artisan brotherhood (*Fratellanza artigiana*), and of the mutual-aid societies, we may fairly accuse them of being prone to lose sight of their purely socialistic aims and principles and to degenerate into political clubs. This weakens their power both for good and for evil. Moreover, the *esprit de corps* in each society being stronger than the public or socialistic spirit, their powers of concerted action and of concerted mischief are comparatively small. Hence the relative rarity of Italian strikes. The societies being many and small, and having no common exchequer to fall back upon, no strike could be long sustained.

As long as the Italian rulers rely on nothing else and appeal to nothing else but the instincts of individualism, they are not likely to be disappointed. But their legislation and administration becomes open to criticism when their laws and methods are such as to presuppose loyalty or public spirit in those who have either to obey or to enforce them. For instance, the law on receipt stamps, not a strictly just law in any country, is both foolish and wicked in a country like Italy. The tradesmen, of course, do not keep stamps in their shops,— why should they? The customers do not carry them in their pockets,— how could they? And to urge the matter might hurt the tradesman's feelings. The consequence is that not one receipt in ten thousand has any legal validity, and that the easy-going public not only can claim no redress when it has been victimized, but remains forever at the mercy of those whose moral law is *caveat emptor*, and to whom alone the law gives the benefit of the doubt.

Generally speaking, the Italians have a great dislike to all

laws and regulations. Not only has the long misrule of their former masters taught them to despise laws, but a far less transitory cause, their innate individualism, induces them to ignore laws altogether ; and sheer laziness enhances the effect occasionally. The king granted quite recently a kind of amnesty to such officers as had contracted marriage without having asked for the necessary permission ; and it was indeed a wise condonation, considering that the number of these sinners was found to be 3,800. That civil laws and police regulations are disregarded on a still larger scale and often with the same impunity, may easily be inferred. The new penal code is excellent and not perhaps unduly mild. But the executive and the judiciary seem incapable of any rigor or harshness. For people liable to righteous indignation Italy is an unpleasant place to live in. Retribution, whether legal or illegal, is singularly lame and tardy, and the moral consciousness is never refreshed by the sight of what is called poetic justice. As to Judge Lynch, he often descends into the street, but only to give an additional kick to the injured party or to rescue the evildoer from the hands of the police. Considering the national vindictiveness of the Italian, the fact that this sentiment never enlists in the service of righteousness speaks with a terrible eloquence of the moral perverseness of the people.

There are many Italians who take offence at the first paragraph of their Constitution. Of course they are right. To proclaim the Roman Catholic religion *the religion of the state* is an act of tyranny. But then it is also a lie, and the presumptive tyranny is lost in the unreality of the presumption. As long as the Roman question was pending, it would have been silly to alarm the clericals by cancelling the paragraph, and now it may seem hardly worth one's ink to do so. Practically, religion is free in Italy, to the heretic as well as to the orthodox, and the Roman priests seem to have accepted their new position. Defeated by liberty, they have learnt to appreciate its power, and now claim it for themselves as a weapon of defence, trusting that it will become in their hands a weapon of revenge. If they are but free to instruct the young and to excommunicate the old, they will renounce all attacks on liberty. Italian rulers can hardly act on purely theoretical

principles in this matter. When the convents had become asylums for brigands and hot-beds of political intrigue, the welfare of the new state required their suppression. But this suppression would hardly have been possible, if the complete separation of Church and State had been proclaimed. Sooner or later, Cavour's formula — a free church in a free state — will, no doubt, become law in Italy, as it will everywhere else. But popular education must first be allowed to get the start, before it can be left to compete freely with Jesuitical pedagogy. When the Jesuits were chased from country to country, Frederic II., the Protestant king of Protestant Prussia, showed his contempt for them by offering them shelter and hospitality. But can Italy, in her present condition, afford to say, as King Frederick said, "I fear them not"?

The Italian people, especially in the rural districts, are still extremely ignorant and bigoted. They keep a strict account with the celestial powers, and cannot dispense with their book-keeper, the priest. Of course, it is different in the towns ; but as it is difficult for any foreigner to understand Italian religion, we shall do well in quoting the authority of a native writer who enumerates the following kinds of urban and suburban religion : — religion from political motives, religion from habit, religion founded on historical consciousness, religion from conventional motives, and lastly pious religion. He adds that these varieties are pretty evenly represented in Italian society. But he forgets that the majority of that society are altogether outsiders, who either never think about religion at all or are avowed free-thinkers. In as far as these "free-thinkers" are thinkers, they form the most estimable of the seven classes enumerated. But there is also a society of self-styled *Liberi pensatori*, whose anthem is *Te Phosphorum laudamus*, and who like to carry about their flag on festive occasions. Their programme is "Science the religion of the future," which is very much like saying, "Music the architecture of the future." But the formula is interesting because it shows, first, that many people can dispense with positive religion and speculative philosophy without missing anything ; and secondly, that though missing nothing, they feel that they ought to miss something. For if

religion can be dispensed with, why offer a substitute for it? The Italian free-thinkers talk like people who have never thought seriously on this subject, and their illusions are perhaps due to the personal character of their opposition. Having at all times identified the Church with the priest — and one can hardly blame them for that — they have got into the habit of thinking that they were solving the problem of man's destiny while battling against the personal priest. Now that the Church has ceased to be formidable to them, and that the priests have ceased to engage their energies and their attention, an intellectual blank must present itself to the free-thinkers, which they ought to acknowledge if they cannot fill it up.

All parties, however, agree in repudiating the various forms of Protestantism. The Italians declare that they will react against "Romanism," without giving up "Catholicism," whatever that may mean. The English did the same in the sixteenth century; so did the Jesuit Passaglia in 1860; so does Canon Döllinger now, — each according to his lights.

Having thus briefly reviewed the present condition of Italy as it reflects itself in the phenomena of public life, in legislation, electioneering, and administration, in trade and commerce, in the press and in religion, we are able to judge with what degree of success the new spirit of liberty has thus far battled, in these various departments, with the dire inheritances of the past: with ignorance and indifference, with selfishness and individualism, with passion or with real or suspected corruption. May we not now ask, *What are the prospects of Italy?* What are her capacities for national prosperity and greatness?

Perhaps it would be better not to ask such questions until history has become what it may never become, an exact science, making the future inferable from the past and the present. In fact, what are our data in such a case? and, above all, what kind of logic are we to use for drawing conclusions from such premises? We know where a comet will be at a given moment, when we have determined five previous positions. We know this, because we know the nature of its orbit. But what is the orbit of human progress? What is the equation of that

curve? From Chinese history we may infer, by a kind of loose induction, that when a nation is left to itself beyond a certain length of time, it ceases to be progressive, and its curved orbit becomes more and more like a straight line. But European nations are never left to themselves. They form complex systems of forces, whose many actions, reactions, and mutual perturbations are far more beyond our comprehension than that beggarly looking "problem of the three forces" which bars, like a sphinx, the progress of physical dynamics.

Some general references might be drawn from comparative statistics. But in Italy, methodical registration was begun only towards the end of 1861, and the statistics hitherto published do not go beyond 1869. Their significance is further impaired by the disturbing effects of the war in 1866, which has caused a breach of continuity in every one of the statistical lines which serve as graphic representations of the numerical data. The increase of population, for instance, has been five per cent in seven years, but it was nearly the same at the end of 1865, and has been hardly perceptible since then. In the same way, the yearly number of marriages increased rapidly until 1866, but has remained low and stationary ever since. We learn but little from these numbers. We can account for the interruption, but we cannot explain the slowness of the recovery, either by the war, which was not a sanguinary one, or by the subsequent cholera epidemic, which was a mild one. More eloquent are the statistics of public instruction, which tell us that the number of those who cannot write or read, which was seventy-eight per cent in 1861, had fallen in 1866 to sixty-six per cent of the entire population. On the other hand, the number of elementary schools which had risen from a few hundred in 1859 to 32,000 in 1864, had increased only by 1,910 at the beginning of 1869, when a few of the provinces showed even a falling off. While, under the Grand Dukes, the school budget of the whole of Tuscany was only 700,000 francs a year, of which 11,000 francs were spent by Florence, Florence alone now spends 800,000 francs a year on municipal schools. But the schools that have worked most steadily at the destruction of illiterate barbarism are probably the regimental schools, through which 90,000 recruits have to pass every year, whether they like it or not.

All this would justify us in considering the actual barbarism and illiterateness of the Italian people as transitory phenomena. We have, therefore, only to observe the effects of primary education on the average Italian mind, in order to ascertain the general tendency of Italian progress.

It is the fashion nowadays to underrate the powers of education, and to look upon the natural traits of a people as stubborn ultimate facts, never to be got rid of. But if education can add no new trait to any mental type, it certainly can modify the type by softening down, almost to extinction, some of its offensive traits, and by bringing out many latent ones whose very existence would never have been guessed without it. In looking, therefore, at the Italian people with its seventeen millions of illiterate savages, we should bear in mind that what we see is not the whole physiognomy of Italy, and that, while many apparent traits in it will vanish, many latent ones will come to the surface. If all we now see in Italy were permanently or essentially Italian, we should have to despair of Italy: her future could be nothing but chaos and moral death. But the brigand and the friar, the beggar and the charlatan, must all pass away. They are picturesque figures, but not instructive ones: we may study in them the animal instincts, but not the mental faculties of the Italians. To form a just estimate of their capacity for civilization, we must not merely look at the surface of Italian life, such as it is sketched, most vividly and correctly, by numberless writers and artists, but we must compare the leading characteristics of the untaught with those of the educated. We shall then find that these differences are remarkably great, especially when compared with the slight distinctions of rank in Italian society.

It may not be generally known, but it is true beyond question, that the natural rapidity of human thoughts and emotions is enormously retarded, first by the habit of articulate speech, later by the power and habit of reading and writing. Deaf and dumb persons are generally quick, passionate, and vindictive. With them sight, resentment, and action follow each other with such rapidity, that bystanders sometimes fail to discover their logical connection. And people who cannot read

or write have this in common with the deaf and dumb, that their speech is not strictly articulate. They do not think in sentences, but in ejaculations, and they get through a long string of successive emotions with a rapidity unknown to those who cannot help distinguishing between nouns and verbs. The changes wrought by elementary education in the Italian savage are, indeed, surprising. The writing Italian not only loses the remarkable retentiveness of his memory, which is of course a great loss, but he also loses his quickness of resentment and of action, which is a gain and a blessing to him. The educated classes in Italy are altogether sedate and seemingly passionless. They are more composed in manners and far more moderate in sentiment than educated Frenchmen. They are apt to become loquacious. But loquacious people, having to listen to their own music, are naturally slow thinkers and slow resenters.

Cruelty, too, is one of the most easily eradicable traits of the Italian character. The brutality and revolting indifference with which the lower orders in Italy are wont to treat animals contrasts strangely with the almost feminine gentleness of the upper classes, who seem incapable of inflicting pain, though they are too deficient in public spirit to prevent or to denounce the brutalities they daily witness.

In general, the upper classes are lamentably vicious and profligate, but they are neither dishonest nor mercenary. Dishonesty seems a decidedly plebeian quality in Italy, and, the *plebs* being so numerous, it is often taken for a common trait of the whole race. As for corruption in the sense of venality, it is but justice to say that Italian politicians are remarkably free from it. The political candidate does not come before his constituents as the highest bidder or as an advertising charlatan. He does not say to them, "Behold how much better I am than my rival." But he says, "If you can find no better man, I will accept your vote and will try to show myself worthy of the honor." Evidently, there can be no scope for bribery at Italian elections. Making due allowance for a little cant and affectation, we may still hope that this shrinking and courteous attitude of the political candidates will do much to raise the tone of Italian politics, in Parliament as well as in the press.

We can thus understand why the Italian government, which has hitherto remained in the hands of those who must be called the best of the land, is carried on upon principles utterly at variance with the traditional notions prevailing among foreigners about the character of the Italian people. Who would have expected, for instance, that while "honest Austria" coolly reduced the rate of interest on her state debt, this classical land of robbers, beggars, cheats, and brigands, which was as near the brink of bankruptcy as Austria, would have energy and honesty enough to keep her engagements with those who had helped her in the hour of need. Thus far, Italy has striven successfully. Some think she has made these efforts from sheer love of approbation, the greater part of her creditors being foreigners. But Austria, too, had many foreign stockholders, without caring for their confidence or approbation.

All this goes far to show that education and culture can eliminate from the Italian character many of those traits which we are wont to consider as essentially Italian, and which, if they were so, would forever mar the political prospects of the country. There are, however, other traits which can never be educated away, and which must continue to influence the fate of Italy, for better or for worse.

The entire want of imitativeness, for instance, which is noticeable in the Italian people, can hardly fail to retard the *spread* of civilization, especially of that material or physical civilization which is now rapidly developing itself in the large towns. With the exception of the southern provinces, there is no lack of roads or railways, and postage, too, is tolerably cheap. Yet the contrast between the large towns and the provinces is painfully striking. There are places not more than twenty miles distant from Florence which are still groaning in barbarism, nay the very suburbs of Italian towns look as if the aboriginal squalor and ferocity, which must not be mistaken for the out-growths of over-civilization common to most large towns, had intrenched themselves there against the inroads and intrusive spread of refinement. Thus it may be said of the Italian people that its "capacity" for civilization is great, but that it is a "bad conductor" of civilization.

The large towns, however, have learnt, and even borrowed,
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a good deal from their foreign guests. And that is natural enough, considering that, docility and other things being equal, a nation learns more from its guests than these learn from their hosts. In England, of course, where the word "foreigner" is, or was, a kind of nickname associated with the proverbial oddities of Leicester Square, this rule cannot hold good. But in Italy the wealthy *forestiere* (and there was a time when every foreigner was wealthy) has always been looked up to as a superior personage, whose wants must be attended to and may be worth adopting. Thus the lack of *influential* foreigners may explain the former "insularity" of the English, while their abundance explains the remarkably cosmopolitan refinement of Italian capitals. The Italians have a sincere respect for England and English institutions. England is constantly quoted as the cradle of political liberty. Yet as long as her literature remained inaccessible to most Italians, French influence predominated in manners, fashions, literature, on the stage, and unfortunately also in politics. Italy might have borrowed some good things even from Germany, with which she has more in common than with France, but she could see Germany only through the obfuscating medium of Austria, and hatred of Austria was long synonymous with Italian patriotism. Moreover, Italians can read (or think they can read) French newspapers by inspiration, without having studied the French language, which would be absolutely impossible with German papers.

That half-physical, half-mental constitution which we call *temperament*, belongs, of course, to the permanent and essential qualities of a race. The Italian temperament is happy, buoyant, sanguine. Only as long as they were unhappy, the Italians were revolutionists. Now that they are free to revolutionize, they hardly care even to criticise. Adversity is a kind of unstable equilibrium: it is motion *in posse*, because it implies the longing for change. But happy people are conservative because they are contented, and are progressive only in so far as they never dread consequences. This serenity is apt to degenerate into levity and indifference. But the habitual want of earnestness in the Italians is, partly at least, compensated by a very remarkable trait which deserves to be pointed out.

When once rescued from the lowest depths of ignorance, they have a keen eye for their own errors and mistakes, and (what is still more surprising) they have the courage and candor to admit them publicly. Compare the tone of the Italian papers after Lissa and Custoza with the tone of the French papers after Wörth and Sedan. When, a few months ago, Austria sent two models of unnamed frigates to the maritime exhibition of Naples, the Italian papers acknowledged the veiled courtesy at once and openly declared that Italy would never shrink from hearing the two names (Custoza and Lissa) which more than any other conveyed a wholesome lesson to her rulers and her people. "Know thyself" is one of the many beginnings of wisdom, and repentance is the first step towards improvement.

The prospects of a nation, however, do not exclusively depend on the character, the faculties, or the temperament of the people. They must, in a measure, be dependent also on the *physical geography* of their country. In the days of Ritter, Malte Brun, and Humboldt, the configuration of a country, its watersheds, its climate, and fertility, were considered not only important, but all-important items in the national horoscope. According to these doctrines, one has only to look at the map of the world to feel convinced that Greece and Italy were the only possible cradles of civilization, and that Africa is doomed to remain without a history forever. Certainly, there is much truth in this. It will always be easy to see, on the map, why Switzerland has no fleet and why England became the mistress of the seas. But railways and telegraphy have conquered nature, and enabled man to ignore her shortcomings. Embankments will make up for hills, tunnels for plains, jetties for headlands, canals for rivers, railways for distance. Even a country with straight coasts and riverless prairies, which, in Strabo's time, would have been a fit abode for hunting savages only, may now become the cradle of a new civilization, and the herculean baby of modern history need not be sent back to the old Mediterranean nursery. He will thrive best, not where he will find the softest down and the sweetest slumber, but where he will find the biggest serpents to kill.

In estimating, therefore, the chances which Italy may have

in the modern giants' race, we should not overrate her well-known resources and advantages of position, climate, and fertility. If ancient civilization had depended on *coal*, it could never have sprung up in Italy. All her mines, vineyards, and orchards will not, in our days, make up for the lack of that one article. Turin has turned her water-power to good account, and it is impossible to predict how far this substitute for coal may be utilized for manufacturing purposes in other parts of Italy. But as yet Italy cannot compete either with foreign manufacture or with foreign shipping. More than one half of the import and export trade of Venetia is still carried on by Austrian ships and passes through Trieste. Genoa is the only ship-building place of any importance in Italy, but there even Transatlantic and Oriental navigation is thought of. A great part of the coasting trade, however, is in the hands of foreigners, and, as far as steam navigation is concerned, this state of things, though annoying to the Italians, is likely to last.

That the rules laid down by physical geography have their exceptions, and that the doctrines on which they are founded are often fallacious, is strikingly shown in the case of the two sister islands which, lying in the very centre of the Mediterranean, at almost equal distances from the three centres of Latin and Neolatin civilization, within easy reach of the Phœnician, the Greek, and the Saracen, with a coast-line of more than one thousand miles, endowed with obvious and tempting advantages, and hiding untold sources of agricultural mineral wealth, have nevertheless remained unknown, unheeded, and certainly uncared for during the thirty centuries of European history. The Phœnicians sailed by on their way to the Cassiterides. The Greeks once dropped a colony there, as though by chance or by mistake. The Carthaginians and the Romans, the Genoese and the Saracens, the Spaniards and the French, the Guelphs and the Ghibellines, have all fought for these islands and invaded them, but apparently to no purpose. The invader never ruled. Having brought nothing worth giving with him, and carrying away nothing worth taking, he left no trace worth recording behind him. These islands have dialects, but no language, records of battles, but no history. They have customs, but no laws; the *vendetta*, but no justice; they have

wants and wealth, but no commerce, timber and ports, but no shipping ; they have legends, but no poetry, beauty, but no art, and twenty years ago it could still be said they had universities, but no students. It would be more accurate to say that the five medical professors of Cagliari imparted their wisdom to ten alumni, at that time. But that Sardinia, with all her emotional and picturesque barbarism, has never produced a single artist, is almost as strange as her barbarism itself. If these two islands were surrounded by the Pacific, they would have been peopled with English colonists long before Australia and New Zealand. If they were imbedded in Central Africa, *in terra domibus negata*, the caravan would have found its way to their treasures, and their trade would now be at least equal to that of Timbuctoo. But situate as they are near the focus of European civilization, in the very spot which an *a priori* geographer would point out as the most favorable place for material and intellectual, commercial and political development, these strange sister islands have slept their secular sleep, like *nodes* on the sounding-board of history, being only slightly disturbed by occasional eddies. There is nothing exceptional in their physical constitution. Though their endowments are above the European average, these islands are no prodigies, no *lusus naturæ*. Why they have become a *lusus historiæ*, and why this question has never been raised by those who make history, is an enigma.

Look at Sicily. Backward and semi-babarous though it is even at this moment, it has at least a brilliant past and a history of something more than raids and buccaneering venturers. It was the cradle of Italian song and poetry, was the birth-place of many artists and savans, and can boast of many monuments and ruins. Even in its worst days, when it had more brigands than roads, it never lost its commercial importance, and exported wine and oranges, fruit and salt fish, salt and sulphur, in very considerable quantities. Yet the coast of Sicily is but little indented. It has but few natural ports, while Sardinia has twelve. It has no timber, while Sardinia has forty-three per cent of its area covered with virgin forest. And what are its few *solfataras* compared with the four hundred and sixty-seven mines of Sardinia ? For all that, the few ports of

Sicily teem with native vessels, while the commercial flotilla of Sardinia consisted, twenty years ago, of barely fifty ships.

Altogether these differences are so striking and so puzzling, that one cannot think of them without craving some explanation. Difference of race will not help us on this occasion. On the contrary, the population of Sardinia being the offspring of an ancestry more mixed than that of the English race, would justify far higher expectations than that of Sicily. All other things being either equal or in favor of Sardinia, the strikingly anomalous state of that island and its stationary lack of civilization must be ascribed to the only two circumstances which cause it to appear less favored by nature and by fate than Sicily, namely, to its greater distance from the mainland and to its perennial want of autonomy. Sardinia had always the misfortune to belong to some Continental power, and its sovereigns, never residing in the island, invariably forgot or neglected it. Iceland had a glorious history, a literature and national sentiment, so long as her heathen parliament assembled on the plain of Thingvalla. With her annexation to Denmark, her history, her literature, her commerce, and her industry perished. Nor was this Denmark's fault, since it was the natural and unavoidable consequence of annexation. Unless an island be almost contiguous to the mainland, like Sicily, it should be left to appoint its own rulers. Whatever may be thought proper with regard to small islands, such sea-bound countries as Crete or Cuba can only thrive and prosper when they belong to themselves. Sardinia and Corsica might naturally form one state, the Great Britain of the Mediterranean, and one cannot help wondering why no great Corsican ever thought the idea worthy of his genius and ambition.

But these considerations lie beyond the range of this article. They have proved how scanty and how feeble the conclusions are which can be drawn from the data of physical geography concerning the political prospects of a nation, and that is all they were intended to do. Far better inferences can be drawn from the ethnographical data of temperament, character, and talent. The simple fact that Italians are good colonists, that they take root in soils on which Frenchmen can do little more than encamp, proves that the Italian race has still a calling in

history. Every born colonist may feel sure of having what the French had not on going to Mexico, "a mission to fulfil." What is this mission? The propagation of the Italian type. And what is the Italian type in its highest maturity? It is the "happy medium" type, the *just milieu*, which by being "happy" and "just" must need manifest itself as moderation and refinement, but which may also as a mere "mean" or middling type find its most adequate expression in mediocrity and indifference. As a moderator and refiner, the new Italian state bids fair to soften the crudities and to reconcile the extremes of modern politics. But how far its typical mediocrity and indifference may effect its own internal development we will not undertake to conjecture. Each reader may draw his own conclusions, which, considering the scantiness of the premises, are likely to depend on his temperament rather than on his judgment.

E. GRYZANOVSKI.

ART. III.—THE MISGOVERNMENT OF NEW YORK,—A REMEDY SUGGESTED.

GREAT cities are, so far, the curse and the puzzle of our civilization. Neither here nor in Europe has any ruler discovered how to rule them. Napoleon made Paris convenient, but bankrupt; and it is scarcely worth while to Hausmanize a city, if it is to be bombarded just when it is completed. London is less expensively but almost as badly misgoverned as New York. In the United States, the great cities are, almost without exception, the prey of jobbers; and it is curious that the most of these city plunderers work by means of Irishmen. The Irish emigrants to our shores display an extraordinary aptitude for misgoverning cities, which deserves the attention of some scientific investigator. They have two traits which go far to account for the success of their leaders in this bad business: they, in common with some other foreigners, though to a greater extent, attach great importance to government employment. An Irishman, just landed in New York, will sweep the streets

for the city government for less money than he will take to serve a private citizen in a more agreeable employment. An American is, until he turns loafer, averse to accepting minor service under the government, because it is of uncertain duration, and he counts it no particular honor. For an Irishman, the uncertainty has perhaps a charm, and his self-importance is swelled by the character of his paymaster. Secondly, the Irish, more readily than any other people amongst us, accept charity. They count it, as a rule, no disgrace to have a patron, and their leaders know very well how to use this weakness. Thus, a notorious and successful New York politician, who was asked what were the means by which he ruled a large part of the city, replied, "I spend almost all my time in helping the poorer sort of people. If a woman has a son out of employment, she sends him to me ; if a man newly landed needs work, he is brought to me ; if any one is in want he comes to me, and I try to get him a place." Now "a place" meant, in this man's vocabulary, a place where he would be paid by the city or county government, well paid for light work, and of course he voted for the man who helped him. If this benevolence had been legitimate, if it had been practised at private cost, and not at the expense of the city, it would have been laudable ; but in this case it answered precisely to Sydney Smith's definition of charity, which consisted in A borrowing a sovereign of B, to give to C. B was here the body of tax-payers of the city of New York.

But such as our cities are, they must be ruled. We cannot change the conditions of the problem. The population of a great city must continue, for a long time at least, to consist, partly, of the very rich and the very poor ; of idle, luxurious, over-cultivated, poor, ignorant, and vicious people, together with a great mass of hard-working, poorly accommodated, struggling, honest men and women, living from hand to mouth. Given such a population, in which there is a large proportion of foreigners, unaccustomed to equal civil and political rights, and yet possessing both ; given universal suffrage ; — how can we obtain efficient and tolerably honest government for our great cities ? This is the real and important question.

Why should a million of people living in streets on Manhat-

tan Island be more exposed to misgovernment than an equal number scattered over one of our Western States? Not because they are less intelligent, for they are not; or less energetic, for they are not. Not even because they are much more vicious, for there is no reason to believe that they are so. If the poorer part of the population of New York were as depraved, vicious, or lawless as it is a bad fashion to represent them, Fifth Avenue would have been "gutted," to use a street phrase, long ago.

The city differs from the country in these, among other respects: —

1st. Fewer of its people own real estate.

2d. A great proportion of them live in crowded tenements, which is not the case in the country of course.

3d. A far greater proportion of them live from hand to mouth, and lay by little or nothing.

4th. The distinctions between wealth and poverty are far more marked in the city than in the country; and

5th. The relations between the wealthy and the poor or humble citizens are less intimate; and not only less intimate, but, what is of extreme importance, of a different kind altogether. In the country rich and poor usually worship in the same church. In the large cities, — notably in New York, — a wealthy congregation usually builds a fine church for itself, and a mission chapel a mile off for the poor its hired or volunteer missionary can gather together. In the country, the sick or destitute are relieved by individual care and benevolence; in the city, a hired distributer of alms investigates the case, and doles out assistance. In the country, you help a man by finding work for him; in the city, you "give him a dollar and let him go." In New York the public schools form now almost the only common meeting-ground for the rich and poor; and these are vigorously threatened by the Roman Catholic influence.

It is plain, then, that the relations existing between the different classes of society, in city and country, are very different. Not only do they live much farther apart in the city, but when they come into contact their attitude towards each other is very different. But one of the most experienced city missionaries of New York is reported to have said that charity is almost al-

ways a curse ; that to give money or the means of living to the poor has been, in the majority of cases known to him, to make them paupers, at least gravely to impair their efficiency ; and that when he had once supplied a measure of coal, or any other indispensable means of life, he found, almost always, that he was called upon to repeat the gift year after year. If this is true, how demoralizing must be the whole attitude of the rich towards the poor in a great city like New York, where Tweed was praised last winter, because he gave out of his ill-gotten millions a few thousands to those of his followers who chose to call themselves " poor."

But this, too, we cannot prevent. The busy city merchant has not time to administer his own charities ; he gives freely, but it is only money ; he cannot give time.

Again, the city differs from the country in this, that its government has much more intimate relations to the comfort and convenience of the people. A large part of the duty of the city government concerns internal improvements,—always and everywhere a fertile source of corruption. Gas, street pavements, sewers, railroads, docks, parks, all these the city government builds or controls, and each becomes a means of robbery and corruption the moment the machinery of the city government is ill arranged.

That is to say, it is far more necessary that a city charter should be perfect, than that the constitution of a rural county should be so. Every point of difference between city and country makes against the city ; makes the evil of a badly framed charter greater, more powerful for mischief, less efficient for good, and more effective for robbery, and, what is worse, for corrupting public morals and debauching public opinion.

Mill rightly reckons it one of the first merits of a good system of government, that it trains the people. " The first question," he says, " in respect to any political institutions, is how far they tend to foster in the members of the community the various desirable qualities, moral and intellectual ; the government which does this the best has every likelihood of being the best in other respects, since it is in these qualities, so far as they exist in the people, that all possibility of goodness in the practical operations of government depends. We may consider, then, as one

criterion of the goodness of a government, the degree in which it tends to increase the sum of good qualities in the governed, collectively and individually." Of course he does not mean that any one shall be made virtuous by act of Congress, or that an ordinance of the common council can create public spirit. But government ought to be so framed that it shall not hinder the exercise of public spirit ; that it shall leave free play for the faculties of men ; and that it shall not make the citizen inactive, by making efficient action for the public good hopeless. It is with public very much as with private affairs : Convince a man that no effort of his can better his private fortunes, and you make him an idler and skulk ; persuade the mass of citizens that their action, however determined, cannot abolish public evils or reform abuses, and you crush public spirit.

Now the great and radical fault of the charters which New York has had is that they did just this. They have crushed the public spirit of the city, by taking the government out of the hands of the people, and by making it needlessly cumbrous and complicated. It is not necessary here to describe the older charters of New York ; none of them were intended to institute a government directly responsible to the people. The evils under which the city suffers grew up mainly under the last charter, which was superseded by the present one in the spring of 1870. Under this charter and its amendments,—

I. The city, which includes the whole territory of the county, was saddled with two distinct governments, which necessitated two separate sets of accounts, two sets of officers, those of the city and those of the county ; and left one of these bodies, the Board of Supervisors, entirely irresponsible to the Mayor.

II. As though this had not been bad enough, it was next arranged that the Supervisors should be what is called a "non-partisan" board ; composed, that is to say, in nearly equal numbers, of men of both political parties. This of course completed their independence, and made jobbing their natural and inevitable business. For the Supervisors were thus as independent of party control, and as well guarded against the interference of politicians and of public or party opinion on both sides, as they were irresponsible to the Mayor.

III. Next, many of the most important functions of the city government were given into the hands of commissions, boards, also non-partisan, and usually appointed by the Governor, or, worse yet, by the Legislature.

The story of these non-partisan commissions runs in a uniform course. When first created, they were zealous and efficient. Generally in about a year the useful men were driven to resign, and in their places at once appeared the worst class of politicians, and thenceforth the commission or board became a mere machine for corruption and political intrigue. While, for instance, Mr. Jackson S. Schultz, one of the most public-spirited as well as one of the ablest citizens of New York, remained at the head of the Board of Health, that commission did good work. But his health broke down under the strain, not of his legitimate duties, but of the pressure and worry of the viler sort of politicians ; he resigned in disgust ; and the board has ever since been a mere political machine. Had Mr. Schultz been sole head of the Sanitary Department, responsible only to the Mayor, he would have been ten times as efficient, and would not have resigned ; for every strong man likes power.

IV. Next, the Comptroller, the city's secretary of the treasury, was elected, and for a longer or different term of office than the Mayor. This made him also an independent officer. This was in accordance with one of the political superstitions of the State of New York, in which people of both parties imagine that, unless the head of the treasury were independent of the chief executive officer, the two would inevitably combine to plan a burglary of the treasury vaults. It must appear odd to such people that the President and his Secretary of the Treasury have never, in a single instance, since the days of Washington, gone off between two days with the treasury balance.

V. The judges and the prosecuting officers were elected, which has proved a blunder everywhere.

VI. What was equally mischievous, the citizens were obliged to elect also a sheriff, school trustees, and a number of other petty officers.

VII. Finally, as though to declare in the most plain and

positive terms that the citizens of New York would elect only rogues to office, the State Legislature assumed to declare, not only how much money the two governments of the city should spend, but for what the expenditures should be made.

This system, which grew up gradually, had two leading ideas,—to destroy party government in the city (by “non-partisan” boards), and to give the Legislature at Albany all real power over the city. It was, of course, a device of the Republican politicians, who then ruled the State, and who, silly creatures as most of them are, imagined that they could thus, if not reduce, at least make of little consequence the Democratic majority of the city. But the results, which were clearly foreseen and foretold by wise men, were: 1. To demoralize and corrupt the State government, which, called upon to decide in matters of which most of its members were necessarily ignorant,—how can a member from St. Lawrence County know what the local needs of New York City are?—had to decide ignorantly, which is but the preliminary step to deciding corruptly. 2. To give the State, finally, to the Democrats, who might have kept it for fifty years, if they had not been even more ignorant and corrupt than the Republicans. It is one of the most certain signs of the utter corruption and demoralization of the Democratic leaders, that they had not spirit, wisdom, and self-control enough to use rightly their great opportunity in New York. We shall see what they did.

The folly of obliging the people to decide at the polls upon the fitness for office of a great number of persons, lies at the bottom of almost all the misgovernment from which we suffer, not only in the cities, but in the States. It is a darling device of the political jobbers, and a most successful one; for, under the hollow pretence that thus the people have greater power, they are able to crush public spirit, to disgust decent and conscientious citizens with politics, to arrange their “slates,” to mix the rascals judiciously with a few honest men wherever public sentiment imperatively demands that much, and to force their stocked cards upon the people. When Smith wants Jones to vote for a Democratic Federal administration, he asks him to vote for the Democratic candidate for the Presidency,—that is all. The Presidential candidate involves all. The Federal

administration controls, taxes, and makes happy or unhappy forty millions of people, excluding Indians untaxed ; its officers are appointed in every State, in every county, and in almost every township ; its treasury draws more than four hundred millions from the people every year ; its laws are the supreme law of the whole Union. Yet, when Smith is called upon to vote upon all these questions and interests, he votes for precisely two persons, the President, and the member of Congress from his district. It is not difficult for Smith, if he is a conscientious or intelligent voter, to discover all about these two men before election day, and to decide which two of the four presented to his suffrage by the two parties are the fittest. The press helps him ; discussion of their character, fitness, responsibility, is general and uninterrupted during the canvass ; they live in glass houses ; whatever in their past conduct or history bears upon their capacity for the places they seek is exposed to public view, and no citizen need vote in ignorance. As voting is, on the whole, a pleasant exercise of power, when one can know for whom one is voting, the Presidential and Congressional vote is always full.

But suppose, at the Presidential election, the citizens were asked to vote for President, member of Congress, judge of the Supreme Court, Secretary of the Treasury, Postmaster-General, Attorney-General, Secretary of State, Secretary of the Interior, Collector of Customs, Collector and Assessor of Internal Revenue, Postmaster, and perhaps a dozen other Federal officers, all nominated on the party tickets, how long would it be before only those who hoped to gain something from the election, and those whom they could persuade or influence, would be the only ones to vote ? Would it not be an insult to a citizen of intelligence to ask him to decide upon the merits and capacity and honesty of such a number of men ? Would he not give up the undertaking in despair, and stay away from the polls,—as half, and the best half, of New York City does now, on the day of a municipal election ?

If, then, the citizens of New York seem to the rest of the country to lack public spirit, here is one reason for it. No thoughtful man, feeling the responsibility of his act, and desirous to do right, or, at least, to vote intelligently, can go to the

polls, at a municipal election in New York, — and this holds true of almost every other large American city, — without disgust with himself, and with the system which, by compelling him, if he votes at all, to support a number of persons of whose character and fitness he cannot inform himself, makes him a dummy in the hands of the swindling politicians who nominate ; and makes reform hopeless.

Nor, when the election is over, does the result tend towards good government, even if a certain proportion of honest men should chance to be chosen. For the result is only a jumble ; the people, or such of them as have chosen to vote, have exercised their authority in a manner which does not give them a responsible government. A number of men have been put into office, all holding place from the same supreme authority, the people, and all therefore equals. There is no responsible head, no one man to whom the people may look, upon whom they may call for honesty or efficiency ; authority and responsibility have been divided out in dribbles ; and when a wrong is exposed, when inefficiency is censured, the blame falls upon no single head ; and thus the first step towards reform, the impaling of the offender, is made impossible by this vicious system ; and the citizen, be he never so public-spirited, after going from one officer to another, trying in vain to fix upon some one the guilt of a misdeed, at last gives up in despair.

What is thus true of the city of New York is no less true of the State, and of many other States. In most of the States of the Union demagogues have persuaded the people that they are wise enough to choose a number of public officers, and that this is the most democratic way, the way in which the people can exercise the most control over their affairs. But in fact it is the way in which the caucus and the reign of political jobbers is perpetuated ; in which the people stultify themselves and resign all real control over their affairs to a secret, unofficial, and self-seeking council of political managers ; and in which able and honest men, who cannot be the creatures of such a conspiracy, are almost inevitably driven out of political life.

The demoralization of our State governments, which is so general that it has excited very just alarm, will never be cured

until public opinion, rightly instructed, demands a change in the State constitutions, which shall restore power to the people by giving them in the State, as they have in the Federal government, a single responsible head, to whom alone they may look for the remedy of grievances, and upon whose head the whole power of public opinion may be brought to bear.

The present Constitution of the State of New York (and in most of the other States it is the same) leaves the Governor of the great Empire State a mere figure-head, almost without authority, except to veto bills, to pardon criminals, and to appoint militia officers. No matter how great or able a man he may chance to be, he can have no broad or proper influence upon the policy of the State, because he has no power over his subordinates, the "State officers." Would he make the prisons better? The prison inspectors are his equals, elected as he is by the people, and independent of him. Would he improve the management of the canals? The canal officers are chosen by the people, and are not responsible to him. And so to the end of the chapter. Not only this, but with an ingenious and almost droll determination to break down power and responsibility, some of these officers are chosen at an election different from that at which the people choose a Governor; and it has happened that nearly the whole State administration has been of opposite politics from their helpless chief. Can a situation be imagined more deplorable for an able and honest man; or more welcome to a trickster, a weakling, or a cheat?

It results of course that a man of brains no longer cares to be Governor of New York; or if he seeks the place, it is only as a stepping-stone to a snug seat in the United States Senate, or as a candidate for the Presidency. It results that, instead of Clinton, Wright, or Seward, New York is promised Oakey Hall for its next Governor, and has Hoffman at present; neither Tweed nor Sweeney caring for such empty honors.

But if the executive has been deprived of the necessary power and responsibility in the city, as in the State, of New York, the legislative body, the Common Council, has been no less deprived of all the functions the exercise of which could give it importance. Whatever legislation for the city has real

importance was transferred to Albany by the Republicans, and has been kept there by the Democrats. If a horse-railroad company wants to use one of the city's streets for its private purposes, it applies to the State Legislature. If a gas company wants a charter, it goes to Albany. Whatever concerns the health, the comfort, the convenience, or the burdens of the citizens, or the usefulness of the port, the State legislature is called upon to provide. Even the budget of expenses and the bill of appropriations were carried to Albany under the Republicans,—usually by a very drunken and demoralized Democratic crowd,—in the last days of the session, were laid in secret before a legislative committee, and passed in a great hurry in the last tumultuous hours of the session. The Democrats, in the new Tweed charter, no more trusted New York than their opponents. They also laid their budget before the Legislature, but in a lump. Tweed demanded twenty-two millions, and leave to do what he and his associates chose to do with the money; and he got both. Suppose the President should demand of Congress four hundred millions, and should say, "You must authorize me to use this as I choose, without giving account to you,"—what would the people say? But suppose he should add, "I want leave, besides, to increase at my own will the public debt." But that is substantially what Tweed has asked and got, under the name of "consolidating" the floating debt which the extravagance and robbery of his crew had created.

To the Common Council under the old charter was left a good deal of the minor administrative business, with which no legislative body can interfere without doing mischief. It granted licenses, authorized street stands, protected the apple-women, bribed the reporters, made out large printing bills; and the rest of its time was spent in jobbing, as was perfectly natural, for Satan finds some labor still for idle hands to do. People cry out that such men as the Astors, the Dodges, the Taylors, and Phelpses, the great and rich merchants, will not be seen in the Common Council. But why should they? They are men of brains, accustomed to the management and control of important affairs, and impatient of trifling. Give the Common Council of New York the power and responsibility which a legislative

body ought to have, let it hold the purse-strings of the city, as Congress holds the purse-strings of the nation, and the best citizens will seek a place on its benches ; if no other reason impels them there, the instinct of self-protection will imperatively do so ; and, once there, under such circumstances, and feeling themselves able to exercise a real control over the city's affairs, they would like it, — for all men like power.

The city charter described above was that repealed eighteen months ago. That which has been substituted for it, and under which New York now lies helpless, was a most ingenious contrivance of the Tammany leaders. They had long cried out against the system under which so many of the city's affairs were carried to Albany ; they were pledged, not only to a new charter, but to a new system. They pretended that their differences with the Republicans were not trivial, but fundamental and radical. But the Democratic leaders, in New York, had profited corruptly by the system which they cried down. It is indeed true that they had not only profited by it, they had been corrupted by it. Moreover, the Tammany leaders hate and fear the people, as all corruptionists do ; and it was not in their desires to give New York a sound and popular charter. They contrived an act which most carefully perpetuates the power of the Tammany ring, makes the people helpless, fribbles away responsibility, and almost destroys the very hope of reform. The recent exposure of monstrous robberies of the Tammany ring, made in the "Times" of New York, stirred the city as no other event has stirred it since the bombardment of Fort Sumter. Disgust gave place to rage, fear, and hatred, in the great body of citizens. But the ring laughed at the fury of their victims, as well they might ; for under the new charter, scarcely anything short of a revolution can help New York. To the threat to oust the ring, by abolishing the charter, the Tammany organ replied that Governor Hoffman is sure to veto the repealing bill. Mr. Hoffman has been so obedient a tool of Tammany, and of the leaders of the ring, that it is probable he would do this. There is one way to make a break in the city ring ; the Common Council has, by the charter (section 29), the power to impeach the Mayor, and bring him to trial in the full court of common pleas of the city ; and the court

may declare his office vacant. But even this would do but little good. See how the charter guards the power of the ring at every point: to remove the Mayor by impeachment would yet leave untouched the heads of the departments, that is to say, Tweed, Sweeney, Connolly, and their partners. For section 107 of the charter declares that the appointing power shall be exercised only by the "Mayor elected to that office, and not by an acting Mayor"; and it adds that "in the event of the death, resignation, or removal of such elected Mayor, such power shall devolve on, and be exercised by, the Comptroller. And it is further provided that when a new appointment of one of the Heads of Departments is made, it shall be, not for the remainder of the term of the officer removed, but for the full term of his office under the charter. What this means we shall now see.

The Mayor who is elected is, under the new charter, to hold his office for two years. But he is to appoint, and Mayor Hall accordingly appointed, four Police Commissioners, to hold office for eight years. Five Commissioners of Charities and Correction, to hold for five years. One Commissioner of Public Works, to hold for four years. Tweed was appointed to this place. Five Fire Commissioners, to hold for five years. Four Commissioners of Health, to hold for five years. Five Commissioners of Parks, to hold for five years. Sweeney is the head of these. One of Buildings, to hold for five years. Five of Docks, to hold for five years. The Comptroller and Corporation Counsel were elective, and hold for four years.

That is to say, even if the Mayor were impeached and removed, his companions in crime would go on just the same; and they could only be impeached, not removed, by a new elected Mayor. Any one can see that this is not responsible government. The people cannot, at a single election, make a clean sweep of the whole city government: they can only elect a new Mayor. The Mayor's subordinates are beyond their power and beyond the power of a new Mayor, except by a tedious process of impeachment.

But this is not all. The new charter fixes the number of one house of the Common Council at only fifteen persons; and the assistant aldermen number only one for every assembly

district. These small houses are easily manageable ; and, moreover, the charter takes care to limit their powers very precisely and narrowly, and leaves a great deal of power over the city, especially that over the expenditures, to the State Legislature, where it rested before. The Legislature of 1871 adopted forty-seven laws relating exclusively to the city of New York, many of them needless and mischievous, and most of them relating to matters on which the Common Council was the proper body to act. Among these was the "Two-per-cent Act," which limited the city taxes to two per cent on the assessed valuation, and gave the sum to be thus raised in a lump to Tweed, Sweeney, Hall, and Connolly, to spend as they chose, — an unheard-of authorization to misappropriate and misuse the money of the tax-payers.

But by one of these acts of the State Legislature the charter is so amended as to give the Mayor the appointment of the Comptroller for five years ; and the following astounding provision is added : "The Mayor, the Comptroller, the Commissioner of Public Works, and the President of the Department of Public Parks" — their names are Oakey Hall, Connolly, Sweeney, and Tweed — shall meet on the 1st of December, every year, and "make and agree upon an estimate of the various sums of money which, in their discretion, will be required to defray all the various expenses necessary for conducting the various boards, commissions, and departments, whether executive, judicial, legislative, or administrative, of the city government, and also for paying the interest on the city debt, and the principal of such debt falling due, and for providing for charitable and other objects, and thereupon fix and determine the amount of all such estimates, which *amount, when so established by said Mayor, Comptroller, Commissioners of Public Works, and President of the Department of Public Parks,*" — that is to say, by Hall, Connolly, Tweed, and Sweeney, — "by the concurring vote of all present, shall thereby become appropriated" ; and the Board of Supervisors are "directed" to cause such sums to be "raised and collected upon the estates, real and personal, subject to taxation within the said city and county of New York."

Suppose the President and three of his Cabinet should thus assume to determine, in a private meeting, how much should

be raised annually for the expenditures of the Federal government, and for what the money should be spent,— what would the people say? But here is a monstrous power, given specially into the hands of four men, who, as the "New York Times" has asserted, and as everybody believes, have been for years engaged in the most enormous and shameless acts of robbery.

This is the Democratic plan of governing New York. It is, briefly, to deprive the people of all power, and to give the chief robbers unlimited and self-perpetuating power.

If any proof is needed that a State Legislature is as unfit to legislate for the local affairs of a city as Congress for the local affairs of a State, here it is. What could be more monstrous, more unjust, more destructive of good government, more dangerous to the rights of property, than for a State Legislature coolly to hand the property of the great city of New York over to four exposed and convicted corruptionists, to do with it what they choose to do in a secret meeting?

Popular government is, as Mr. Lincoln happily phrased it, "government of the people, by the people, and for the people." There are, it is said, Americans who do not think it the best kind of government; but probably no American out of an insane asylum imagines any other kind of government possible here just now. I believe it to be the only form of government which can produce good and lastingly good results, and therefore in the long run the cheapest. It requires patience and a certain amount of faith in the observer; and if any one expects perfection from it, he will be disappointed. But it is, on the whole, the cheapest and the least mischievous form of government yet contrived by men, and it is this because it works according to natural laws; because—if it is really popular and not a sham, if the machinery is so arranged that the people do actually control—it enables them to have just as good a government as they want. No community has a right to more than this; nor is any man wise and just enough successfully to impose upon a community, for any length of time, a government better than they desire.

The great evil of all the charters under which New York has suffered is that they have limited the power of the people over

their own concerns. New York City government has not really been popular. It has never made the people responsible to themselves. It has cut them off from political education ; and to a great extent this has, of late, been purposely done, either by Republican politicians anxious to make of no account the Democratic majority of the city, or by Democratic politicians eager to job and rob ; and both have been assisted by a multitude of rich men, who had no faith in what they call “ the populace,” but, on the contrary, a great terror of their poorer fellow-citizens. Now there is nothing more absurd or less reasonable than this dread. The mass of the people of New York are poor, own no property, and live from hand to mouth ; most of the poorer sort in New York are wretchedly lodged ; yet they are, in the main, a law-respecting, peaceable, orderly people. In the riot of 1863, the most serious New York has seen, there is the strongest evidence for the assertion that the actual rioters never numbered one thousand men ; with these were an inconsiderable number of women and street boys, who stole, and occasionally set fire to an abandoned shop or warehouse. But the people of New York, though their fears had been artfully appealed to for weeks, had no part in the disturbance. One proof of the good character of the population of the city is seen in the ease with which disturbances are put down ; and this in face of the fact that a riotous body has always full sway for days to organize, and is quietly allowed to gather on its own publicly appointed day, and to obstruct the streets, and badger the police, for hours, before it is dispersed.

To say, then, that the city is unfit for popular government, is nonsense. Moreover, almost every conceivable device to rule it without the direct and effective action of the people has now been tried. There remains only this one plain, square, honest, simple way, which Democratic and Republican hack-politicians alike abhor, because it would, within five years, and probably within three, put an end to jobbing and inefficiency, and give the city a reasonably honest and useful government, in which the best citizens would be able and proud to take a part.

If it is asked, what is the precise machinery of such a system as I urge, I must reply that it is not my duty to plan a new city charter. But look all over the country, and ascertain

what form of constitution has, on the whole, given the most satisfaction, and best fulfilled all the conditions of (1) interesting the people in the government; (2) giving them complete power over their rulers, and thus enabling them, whenever they wished, by a single effort, to change these; (3) consequently securing, generally, efficiency and honesty in the rulers; (4) giving these abundant power to preserve the peace and secure obedience to the laws; and (5) thus securing to the people as good a government as at any period they want. Better they have no right to.

The Constitution of the United States is that organic law which, better than any other, fulfils all these conditions. Now what are the prominent features of the machinery it provides?

1. One responsible head, the President, who appoints all his subordinates, and to whom alone the people look for the enforcement of the laws, for the preservation of order, and for the exercise of economy and the practise of honesty in all the departments of the administration.

2. A judiciary appointed for life.

3. A legislature which holds the purse-strings, and determines how much money shall be spent and for what purposes.

Now, there is in all this nothing which could not be applied to the government of a State or a city, just as well as to the government of the whole country. If New York is to have efficient and economical government, its charter must accord with the Federal Constitution in these three great points. First of all, it must give the city a Mayor, elected by the whole people, for a short term (I should prefer one year), who should appoint, *but for his own term of office only*, all his subordinates, including the Comptroller, and who would thus be directly and solely responsible to the inhabitants of the city for the good conduct of these officers. It must provide a city judiciary to be appointed by the Mayor for life, or good behavior. It must provide a Common Council which shall have all legislative power over every interest which is purely municipal, and, above everything else, over the appropriations of the city government.

It is not important that this city legislature should have two houses; and there are some good reasons why a single

house would be better. But this ought to be numerous. It should contain at least one hundred and probably one hundred and fifty members. That would so subdivide the city into small districts, as to give every part of the population a chance to be represented by men known to them; and it would be a check upon corruption, if any such check were needed.

Further, the charter should prohibit to this legislature the exercise of any administrative or executive functions whatever. This has been one of the most fertile sources of corruption and misgovernment in the city, as it is wherever the organic law does not prohibit to the legislature such functions. Moreover, the charter should prohibit the passage of special laws, or the granting of particular privileges. Whatever a legislature may do usefully, it may do, even in a city, by general enactments, giving equal privileges to all. It would remain, to define the limits of the municipal government; to declare, carefully, what belongs to the city, what to the State, and what perhaps to the Federal government. And here I am conscious is an undertaking of no little difficulty. I would begin by giving to the Governor the appointment of the sheriff. That officer is, properly, the lieutenant of the Governor, in a county. He is, properly, a part of the State and not of the local or municipal administration. He is the custodian of the peace of the county. It is his duty, on the order of the Governor, or without if the case is urgent, to suppress unlawful assemblages, to quell riots and affrays, and to arrest and commit to jail, if need be, those engaged in the disturbance of the public order. For a breach of the peace, crime, or misdemeanor, committed in his presence, he may arrest without a warrant. It shows to what an extent the government of the city and State of New York have fallen into disorder, that the sheriff was not even heard of on the day of the Orange riot. The Mayor surrendered to the mob; and the Governor, who originally agreed with the Mayor, when he changed his mind took the affair into his own hands, issued all the orders himself, and of course, as is the custom with men of that kind, suffered the mob to gather in force and obstruct the streets for hours, during which the business and comfort of an important part of the city were disturbed, before he chose to disperse the rioters. If he had resolutely ordered

the police to keep the streets clear and unobstructed from early dawn, no mob could have collected, and the troops need not have fired. No one would have been killed ; but the infuriated Roman Catholic Irish would have been still more angry with the Governor than they now are.

In preventing or quelling disturbances of the peace, the sheriff acts under the orders of the Governor, who is commander-in-chief in the State, and sworn to protect the peace and maintain order. He should, therefore, be a State officer, appointed by the Governor, and responsible to him.

Over every matter which concerns the city specially of course the city government ought to rule. Thus the appropriations for the city government,—how can the people of the whole State, assembled by their delegates at Albany, know how much the city of New York ought to spend, or for what? As reasonably might the Congress at Washington assume to decide upon the necessary expenses of the different State governments. So, too, with the corporations which exist alone in the city, and for the convenience of its people, such as street railroads and gas companies. Is it not absurd that when a company wants to lay rails and run cars in streets which are the property of the inhabitants of New York, and for which these have paid, the company should get a charter at Albany? The streets of the city are the property of the citizens ; and if New York had possessed a proper charter, if the rights of its people had not been shamefully invaded by the State, a way would have been discovered long ago to make the city railroad companies keep in thorough repair the streets they use, if not all the streets ; to make the gas companies light free of charge the streets which they also occupy, and at will break up ; and thus to effect an important saving to the tax-payers.

The public schools, the police, the Fire Department, the Water Department, etc., would, of course, under such a charter, be under the charge each of a single head appointed by the Mayor, removable by him at his own will, and going out of office with him at the expiration of his term. Each head of a department would name his subordinates, as is the custom now in the Federal administration. It would belong to the Common Council to scrutinize their acts and accounts ; and the people would hold the Mayor responsible for every shortcoming.

Under such a system of direct responsibility, the Mayor's life would be made intolerable if the streets were dirty, if the schools were mismanaged, or if the police were inefficient ; and he might even, with such a goad as this, by and by succeed in abolishing in our cities the absurdity of ringing the bells when a fire is discovered, and even denoting, as they do in New York, by regulated and published signals, to the noble fraternity of thieves and pickpockets, where precisely a house or shop is on fire. Surely nothing is more ridiculous, even in China, than to hire bell-ringers to point out to the idlers and criminals of a great city where a fire is raging ; the fire-telegraph having already informed the firemen, the only persons who have a right to this information, or who can usefully appear at a fire.

As it is the State government which would grant such or any city charter, it would do wisely to prohibit to the municipality certain things. It should, for instance, forbid it to hold real estate, except so far as this is needed for the public offices, the school and engine houses, the parks and pleasure-grounds. Markets and docks are well managed only by private hands ; the example of the English docks, which are owned by companies, shows that this is perfectly safe ; and the city legislature may always provide by general rules against their mismanagement. As to markets, no one pretends that a city ought to provide accommodations for the sale of dry-goods, clothing, flour, or molasses ; and there is no good reason why it should undertake this service for the venders of meat and vegetables. Governments have never done this work well ; and they can safely leave it to private enterprise, under proper and general sanitary regulations.

Finally, under such a charter, decentralization might be possible, by confiding to the citizens in subdivisions certain duties which experience might show could be better done thus than by the general administration. I am not prepared to say how far this might be carried ; but it is a fact that for some years the only clean streets in New York, at all seasons, were two or three which were kept clean by the private enterprise of their inhabitants. In Chinese cities the residents of a street are made to keep the peace within their bounds, and are held

responsible for good order ; and as our cities increase in size, we may discover the need of providing by decentralization for their better government, and, what is of extreme importance, for the political education of the mass of the people.

In conclusion, it remains to ask what effect such a charter as has been suggested would have upon the government of a great city like New York.

1. It would let in daylight. It is not improbable that at the first election under such a charter, the old corruptionists would be returned to office. It is possible that the worst demagogue in New York would be chosen Mayor. But what then ? He and his followers could scarcely steal more than the Tweed-Connolly gang have stolen in the last year. But they would have to rob in the light of day. The Council would have to make the appropriations publicly and after a discussion which would fix public attention upon the result. It might appropriate many millions more than were needed, but it could not do this secretly ; and at the next election their conduct would be punished, and the people, clearly instructed by the press and by public speakers, and alarmed by self-interest, would surely put new men in office.

2. It would do away with such expedients as the Citizens' Association committees, which, under the present system, stand between the people and good government, and serve to discourage and make more helpless the good citizens. The present iniquitous charter of New York could not have been adopted, had not the manager of the Citizens' Association, Nathaniel Sands, at the last moment, agreed to take office under Tweed and Sweeney, and put the whole influence of the reform society which he controlled at the service of these men. Sands is Tax Commissioner ; his son and his assistants hold office under the ring ; and the city is bound hand and foot, because its most eminent citizens trusted Sands, instead of trusting the people.

3. Having the prospect before them of a reform by appeal to the people, and being able to hold one man, the Mayor, responsible for abuses, and a body of residents of the city, the Council, for extravagant appropriations, good citizens would no longer be tempted to lend their names, as they do now, to bolster up a rotten government, in the futile hope of being thus able to con-

trol and check corruption. At present some of the most honorable citizens of New York hold office under the ring. They do so, undoubtedly, because they see no other way to check extravagance and misrule. But their efforts are vain; and it is with them as it is in all such cases; their character is lent to the ring, and serves to bolster up corrupt men and keep them in power; but they have little influence themselves. It is the same kind of mistake which Mr. Seward made when he remained in President Johnson's Cabinet. He could not control the President, but he ruined himself.

4. It would give a real interest to city politics. At present the editors are as unable to decide upon the worthy candidates for the numerous elective city offices as the citizens. Most of the New York daily papers employ a special person, whose duty it is to inform the editor of the changes in city politics, to advise him of the character of the men nominated, and in fact to decide the course of the paper towards the municipal candidates. These persons are mere reporters; not uncommonly they hold office under the ring; and their chief work is to darken counsel by words without meaning.

5. It would, by confining the duty of the citizen to the election of two persons, a Mayor and a councilman, disable the political jobbers, whose success depends upon their ability to nominate a long ticket, of men little known, and whom no citizen not devoted to local politics — no honest voter, that is to say — can hope to know much about.

6. It would educate the people, would give the best citizens a lively interest in the city politics; would make a city election intelligible and easily understood, not only by the humblest citizen, but, what is of more importance, by the conductors of the press, who are now either silent, because a municipal election in New York is a riddle to every honest man, or allow their papers to be used by friends of the candidates.

7. It would restore party government in the city, and thus make the minority vigilant in discovering and denouncing dishonesty and inefficiency, for which the majority alone would be responsible.

8. It would open the door to many reforms and new expedients in government, which now have no chance. For

instance, it might be found useful to try some system of minority representation ; though, if the Council were a numerous body, this would hardly be necessary.

9. It would lead the wealthy citizens to interest themselves in the political education of their poorer neighbors. Why, for instance, should not the owner of a tenement-house, in presenting his monthly or quarterly bills to the occupants, make out an account of so much for rent, and so much added as the tenant's share of the general taxation ? Such an exhibit would lead the inconsiderate poor to think, and to vote intelligently.

I have endeavored to outline the only possible system under which (as I believe) our cities can purify their governments. Its sole merit is not that it will absolutely and at once cure the present evils,—only a political quack would venture to promise such a cure,—but that under it the people could have just as good a government as they wanted ; and that they would be undergoing, constantly, a course of political education. Of course, the political hacks, of both parties, will oppose such a system. Its adoption would ruin them. Unfortunately a great many good and honest people will also oppose it, because they dread the immediate result, and have little faith in the future. And yet it will be adopted ; because it is the only just and right system, and because almost every other possible device has been tried, and in vain.

CHARLES NORDHOFF.

ART. IV.—LANGUAGE AND EDUCATION.

OUR American system of education is one which, on many accounts, we regard with a just pride. Its glory is its broad and democratic foundation, in the measurable instruction and enlightenment of the whole people, of all conditions and of both sexes. It rests upon a thorough and comprehensive humanity, which denies no one his rights to happiness, and seeks to advance the interests of all. The free public school, and the use that is made of it, constitute the most important of our institutions. Though not

so perfected in its details as the common school of more than one older country, ours attains, upon the whole, better and higher results than any other, because it is a more integral and harmonious part of our general polity than they of theirs; because the inducements to self-improvement, the rewards offered to intelligence, are greater here than elsewhere. But, fair as is the show it makes to those who look on from without, those who have most to do with its management know best its many and serious defects, know the amount of indifference and abuse, of bad attendance, bad teaching, bad superintendence it involves, the waste in it of effort which, if better directed, might produce far better fruits. Even in the oldest States, a great deal of earnest thinking and skilful handling has to be constantly applied to the great machine of popular instruction, to keep it in motion and to improve its effectiveness; and there are vast regions of our country where even the weakest and worst managed system of which we here know aught by experience would be an immense gain and blessing. We cannot wish too heartily, or work too earnestly, for the success of all effort toward the improvement of the lowest grades of education, since upon them depends most directly our safety as a nation. We have undertaken to let our government and the constitution of our society represent the average of virtue and intelligence in the whole community; we cannot now abandon the plan, if we would; and we ought not to flinch from it, if we could: but it is an undertaking fraught with danger; we shall tear one another in pieces if we do not succeed in restraining and transmuting, by educational influences, the aggressive selfishness of individuals and communities, of wider but limited classes, and of associations. Men will strive after what seems to them happiness; and to raise the ideal of individual happiness, to make men really love better things, is the object at which we are directly to aim, if we would benefit and save our country.

These are truisms, perhaps; but their importance is such that they cannot be too often or too persistently brought forward and urged.

In order to help the cause of popular education, we do not need to take hold of it directly; for its progress depends in no

small degree on that of the higher education. The whole system is a connected unity, and that which lifts the superior departments tends also to raise all the rest. Now our higher institutions are in no more satisfying condition than our lower ; they are even less fitted to bear comparison with those of other countries. This need not be said in a fault-finding spirit ; such a state of things is an unavoidable result of our history and present condition of progress, and will be improved when we as a community are prepared for its improvement. To build up great universities out of hand among us is as impossible as to build up art galleries rivalling those of Europe ; nay, far more so ; since a university is an animated organism, only to be called into being by lively needs and sustained by living forces ; it cannot be constituted and then left to subsist until the nation shall grow up to the use of it. Our colleges and "universities" are possible universities in the germ ; agencies of great value, and doing the work which needs to be done, and which they have undertaken to do, in a far better manner than if they were to adopt the style and methods of real universities ; some of them will by degrees expand and develop until they are able to assume the superior office. By a university we mean, of course, a highest institution of learning, according to that ideal which is more nearly realized in Germany than elsewhere ; a body of eminent teachers, with such external apparatus, of trustees, buildings, collections, and the like, as is needed to give their work its highest efficiency ; teachers who are also investigators, actively engaged in the pursuit of knowledge, for its own sake and for the sake of its communication to others ; men whose business is equally the increase and the diffusion of culture ; who represent in all departments of study the highest that has yet been attained, and to whom learners can resort, not merely to follow out a prescribed course, but to obtain in any given branch the most efficient help, the farthest advancement as preparation for independent labor. This is not the English idea ; the English university occupies essentially the same ground as our colleges, although not without very important differences of grade and method ; its sphere is that of the gymnasium, or preparatory school ; and so wedded is the English mind in general to such a conception

of it, that even Mr. Mill, in his famous and admirable address at St. Andrew's, looks no higher, and would make his university still a mere school where youths should be carried, under the boyish stimulant of emulation, through a certain stereotyped course of study, regarded as necessary for every well-educated man. There is no reason, as surely there is also no danger, that we should take as our models Oxford and Cambridge, as they are at present: institutions contracted in plan and aim, though intense in energy; in which the accessories have in great part overwhelmed the essentials; which turn out many fine characters, but produce hardly any great scholars; among whose most conspicuous features are abuses consecrated by time, resources misapplied, and energy wasted upon trifles.

It seems likely, however, that the English system of education will have to endure, before the end of this century, a modification little less pervading than our own. One and the same force is shaking both the older fabric and the younger, the stronger and the weaker. This force is what we ordinarily call "modern science." A class of studies is crowding itself upon the attention of educators which but recently had hardly an existence. Its claim has naturally been challenged by the branches of knowledge which were already in possession of the ground, and with whose spirit its own appeared to be more or less at variance. Thus has arisen that contest between classical and scientific studies which is now in lively, not to say violent progress. At its liveliness, or violence, no friend of education need feel alarm. We are used to seeing the desirable result brought about by the collision of opposing influences. If even our staid earth cannot be kept plodding her round about the sun except by the discordant concord of two forces, whereof the one would plunge her headlong into the fiery photosphere of the central orb, the other hurry her away to the frigid regions of measureless space, we cannot well expect anything better in the more jarring and ill-regulated counsels of men. No speedy reconciliation of views upon the matters here in dispute is to be looked for, if, indeed, it shall ever be reached. But it may be at least brought nearer, if we can arrive at a better understanding of the principles which are involved in the controversy, and upon which its settlement must

in part depend. There is perhaps room, without entering into anything like a polemical discussion, to draw out some of those principles and put them in a clearer light. And, since language has been in a manner placed on its defence by the extremists of the one side, who are disposed to treat with contumely its claims as an agency in education, we may profitably endeavor to take such a view of education on the one hand and of language on the other as shall show us what is the relation of the latter to the former, and what the place of linguistic and philological study in the general scheme of human training.

Education is something essentially and exclusively human. There is nothing of it, there is nothing analogous with it, among the lower animals. These, indeed, have their powers gradually developed, but only by a force acting from within ; Nature herself is their sole instructor. The old bird does not teach her young ones to fly or to sing ; at the utmost, she watches with a degree of conscious interest the growth of their capacities ; and the result is the same, whether they come forward in freedom under her eye, or in the confinement of cage and aviary. In man, too, there is a drawing out of innate powers ; no one can be made by education anything but what nature has given him the capacity to become ; but it is through the process of instruction by his fellows, of communication from without, of appropriation on his part, under guidance, of the results of others' labors. That development which among the less favored races of beings reaches its monotonous height in each individual has been in man a protracted historical process, a slow and painful rise from step to step, an accumulation to which every generation between our own and the first fathers of mankind has contributed its mite ; and which is still going on in the same way. The educated man is one who is not left to himself to discover and train his own powers, but is kindly taken by the hand and led forward to the possession of all he can grasp and use of the wealth garnered by his predecessors. The sum of this garnered wealth we call *human culture* ; to become endowed with it as his own individual patrimony is the highest privilege, the duty, of each individual, and to put him in possession of it is the aim of education. Education seeks

to make the career of the individual an infinitely abbreviated epitome of that of the race, to carry him at lightning speed over the ground toilsomely traversed by those who came before him, to raise him in a few years to the height which it has cost them scores of centuries to attain. But the whole store of human culture, in all its constituent details, has long been far too vast for any one to think of appropriating ; the utmost that can be hoped for is to gain its general sum and effect, its most valuable results, and to be placed in apprehensive sympathy with it all, so as to feel its worth in one's self and to be exalted by it. And this virtual effect of universal knowledge, as lying within the reach and applicable to the uses of each man, we call individual culture ; it is not precisely knowledge, though founded on and representing knowledge ; it is knowledge generalized and utilized ; it is the sum of the improving and enlightening influences exerted upon us from without. Many of its essentials are won along with but a small part of the details of knowledge, and even in a kind of unconscious way, through the training influence of our surroundings ; through the adoption of habits and institutions which, although we do not realize it, are founded on wide knowledge and long experience ; through cultivated manners and self-government, imposed by the usages of society ; through principles of morality and rules of conduct representing the enlightenment of conscience ; through general views, opinions, and beliefs, accepted upon trust, and perhaps never fully tested.

The mere endowment and elevation of the individual, however, his shaping-out (*Ausbildung*), as the Germans call it, though the first and most proper end of education, is not the only one. Culture could not even be maintained thus at the height it has reached ; and, like a ball sent rolling up an inclined plane, the moment progress was brought fully to a stop, motion downward would set in. If men's energies were directed to the complete acquisition of all that the past has produced, they would be found unequal to the task, and retrogression, perhaps even to the dead level of savage life,—the state of nature, as we call it,—could not fail to be the result. And we owe to our successors not merely the maintenance, but also the extension, of the basis of individual

culture. We owe it to ourselves as well, since the highest intellectual pleasure of which man is capable is that of mental production, of adding to the general store of human knowledge. This requires that, after laying a certain wider foundation, we throw ourselves into some particular branch, or even some minute branchlet, of knowledge, advancing there as far as the farthest have gone, and pushing beyond them. We sacrifice something of our general culture in order to become specialists, endeavoring to repay to those who come after a part of our debt to those who have gone before. A certain taint of selfishness clings to him who does not follow such a course. A certain taint of dilettanteism also; for he who limits himself to gathering up others' results, without going down to the very processes by which those results were won, and winning others, so as to know whence culture comes, and how, and, by being profoundly learned in one thing, to appreciate the cost and value of learning everywhere, can hardly lay claim to the possession of high culture at all.

Moreover, there is another and a sterner reason why we may not devote ourselves to self-improvement as our sole occupation in life. The lower wants of our nature are clamorous for satisfaction, and will not be put off. Men must eat and drink, and be clothed and housed; and in ministering to these necessities the greatly preponderating part of human labor must forever be engaged. The struggle for existence is severe; none can live without something of that knowledge which is power; none can live without the aid of his fellows, and without buying this aid by in his turn helping them; he must work, striving to give to his work the highest value. We know well, too, that this external incitement is necessary to our progress. We are not wise and pure enough to do without it. In the sweat of our brow we are condemned to eat our bread; in the same bitter broth we have also to partake of the other and higher enjoyments that life brings us. The interlacings and reciprocal influences of the lower selfishness, which seeks the animal comfort of the individual, and the higher, which seeks his intellectual and moral advancement, or which seeks the welfare of others, or of the race, even at the sacrifice of self, are infinitely various, and intricate beyond the power

of philosophy to unravel. Endowed and privileged castes, raised above the necessity of labor, degenerate and die out. And those who are not consciously at work to help their fellow-men fail of the very highest pleasure within men's reach, one that no mere intellectual gratification can pretend to rival.

These causes exert upon education a doubly modifying effect. In the first place, its end is in a manner divided into two, connected and yet separate ; namely, general culture, and special culture or training : that which enriches the man himself, raising him up toward or to the level of his age ; and that which, in addition, equips him for his special life-work. Neither can be left out of sight in shaping the general system or the particular course of education : it can only be made a question when the one shall supplant the other,— or rather, shall prevail over the other ; since both may and should be followed by us as long as we live.

For, in the second place, the time of education is also affected. Life is divided into two parts, in one of which we are chiefly learners, in the other chiefly workers. First, as we say, we get our education, acquire our profession ; then we practise, put to use what we have learned. This common statement, it is true, exaggerates the difference ; for, as we have just seen, our whole life should be a continuous process of education, as it may also begin very early to be actively productive. There is merely a kind of polarity induced in it by circumstances ; preparation prevails over application at the former end, application over preparation at the latter. For a time we are borne upon the hands of others, and our every want supplied ; nothing but growth is expected of us ; then, unless we are of those unfortunates who have to grapple with the hard necessities of life from the very outset, the way is still made easy for us a little longer, while we are getting ready to play our independent parts in life. Thus our earlier years, in comparison with the later, are chiefly preparatory ; they are spent in laying foundations ; on the one hand, for general culture, on the other hand, for special training. How the time is shared between these two purposes has to be determined by the circumstances and tastes of each person, and by the offered facilities and demands of each community. A higher standard

of education implies a longer period devoted to the former, and a superior grade of culture reached. The highest or ideal grade is one which should enable us to overlook the whole field of human knowledge, so as to understand the position and relations of every part, to appreciate the nature and degree of its importance, and to sympathize with its progress. But, besides that this ideal grade is attainable by none save the strongest and most gifted natures, such approach to it as is within each one's power can only be the result of a whole life of training under the most favoring circumstances ; and we have, moreover, deliberately to sacrifice a part of it in favor of our life-work, only being careful to cast our youthful studies in such a form as shall best lead the way to our obtaining thereafter whatever our capacities and our situation in life shall put within our reach. And this necessity of making a selection and laying a foundation, of getting ready for what is to be done later, is the circumstance that gives to education in its narrower sense, to school instruction, its "disciplinary" character.

Upon this point we must dwell a little ; for discipline is a word with which not a little conjuring is done nowadays by men who fail to understand fully what it means. It is often spoken or written of as if it were itself an end, or at least the means to an end ; as if it were something quite unconnected with the acquisition of valuable knowledge ; as if the acquisition of certain kinds of knowledge always gave discipline, while that of other kinds did not ; and so on. Now, properly speaking, culture and training are the only ends, and the acquisition of knowledge the only means to them, while the position of discipline is rather that of a method. The essence of discipline is simply preparation ; that is a disciplinary study which duly leads the way to something that is to come after. He who sets up discipline and knowledge as opposed to and excluding each other wholly misapprehends their mutual relations, and casts the advantage into the hands of his adversaries. In reality, the connection and interdependence of the two are complete. No discipline without valuable knowledge acquired ; all valuable knowledge available for discipline ; the discipline in proportion to the amount and value of the knowledge acquired : these are fundamental truths in the theory of education.

Only, of course, the degree of value of any given knowledge is not absolute, but relative. One kind of knowledge is worth more to men in general; another to a particular learner, in view of his natural disposition, his past studies, or his plans for the future; one kind is worth more than another at a certain stage of education; one kind should be taught in a certain manner and extent, another in another. The disciplinary method implies that the instructor, viewing the whole body of knowledge, in its connections and applications, will bring before his pupil's mind the right kind, at the right time, to secure the best result in the end.

Equally, of course, the method can never be carried out in ideal perfection. It involves an amount of study of the wants of each particular scholar which is but rarely practicable, an amount of skill and foresight which human instructors cannot attain. It is most nearly realized, perhaps, in the case of the young prince, born to rule a kingdom, for whom the best masters in every department can be engaged and changed, under the direction of some wise manager, whose whole mind is devoted to the task. Yet, even here, the gravest errors and failures are more than possible; and, in less favorable conditions, the degree of success is liable to be proportionately less. Our general systems of instruction, by classes, with established courses, are at their best only hit-or-miss affairs. Many a pupil is spoiled, as scholar and as man, whom a different treatment would have saved. And hardly one grows up to eminence, or even to moderate success, who has not to look back with regret to labor misdirected, and time lost by being honestly and diligently misspent. This in no wise constitutes a condemnation of our system; it is simply a result of the imperfection of human endeavor, and irremediable. There is no wisdom at command to render it otherwise; the lessons of experience are as costly as they are valuable. But a recognition of the fact should save us from excessive faith in any given system, or from the adoption and maintenance of a single rigid system, to be imposed upon all learners. The field of universal knowledge, as compared with the capacity of the individual learner, is infinite; and not all minds need reap the essentials of culture off the same part of it. We should not be too dis-

trustful of consulting the taste of a pupil, because it may lead him to pass by unheeded something of which we know and feel the value.

For, sooner or later in the process even of general education, the pupil himself has to be taken into the counsels of those who direct his course. The young child, indeed, can be set at what you will, and kept to his task, however disagreeable it may be, by pains and penalties ; the old-fashioned motive-power of the rod and ferule has made many a good scholar and true lover of learning, although the ideal educator is one who, without swerving from his disciplinary course, yet contrives to make it all the way alluring. But this childish method of compulsion cannot be kept up to the end of school training, lest the great object aimed at be endangered or lost. That education is a failure which is felt throughout, or mainly, as drudgery, for all effort to acquire will cease when the pressure of constraint is removed ; and this is a result of all others to be deplored ; nothing that leads to such a catastrophe has any right to be called disciplinary. It may be made a question in each particular case how soon and how far the pupil's disposition shall be humored. No doubt there is often the highest and best discipline in good hard drudgery, in crushing out or transforming a decided liking or disliking, when the character under treatment is of a temper to bear such forcing ; and there is always a due medium between a facile giving way to indolence or idle preference and a wise yielding to the natural bent. But no one should be managed as if he were going to be forever in the hands of tutors and governors, and could be made to do what they willed till the end of life ; when he undertakes the care of himself, he must be ready for it, not merely as having learned to apply his powers, but as having felt the reward and enjoyment that comes from their application. If he is to be a man of culture, he must quit school and go forth to his life-work with a generous capital of valuable knowledge of which he feels the value, informed of the sources of knowledge and trained in the ways in which it has been and is to be won, realizing in some measure what there is in the world worth knowing, and craving to know it. Then, indeed, the process of a life-long education has been properly begun, and may be trusted to go on by itself to the end.

Our view of education, it will be noticed, excludes the element of intellectual gymnastics, of exercise for the mere sake of exercise, with indifference to the value of the subject-matter, or with preference (as some would even have it) for that which is and must ever continue to be unpractical and useless. No worse error, surely, can be committed than that of founding education upon such mock work ; it is a running completely into the ground (to use a phrase more expressive, perhaps, than elegant) of the true disciplinary idea, that we are, in the season of preparation, to acquire knowledge in view of its prospective rather than of its immediate value. The human mind is not a mill which is going to grind grain famously by and by if you practise it in grinding gravel-stones now ; it can do no real work upon anything but realities ; it must acquire in order to produce ; it can only give out of such as is put into it. It is a storehouse as well, which a disciplinary education fills systematically and carefully, blocking up none of the entrances or passageways by crowding, packing at the bottom those things which should go lowest that others may rest upon them, setting everything in connection with its proper belongings, and leaving always more room, instead of less, because the receptacle, if rightly treated, is indefinitely extensible in every direction ; because, if the foundation be made broad and firm enough, we may build securely up to heaven. The rooms should not be filled with rubbish, to lie neglected or to be turned out again ; time and space are both too precious for that. Nor must too much even of valuable material be carted in in bulk, to be left unarranged, and at last, perhaps, to fall into hopeless and choking confusion. But most of all, it is not to be filled up with frames and shapes, having the show of solidity but not its substance, and whose hollowness shall some time lead to the disorder and downfall of what is stored about and upon them. Of the various kinds of cram, by far the worst is that which crowds in prematurely the derived results of learning, inferences and beliefs, systems and general truths. This is the strong meat that must not be set before babes. The young mind has a wonderful appetite for bare facts, and not an unhealthy one, since its power of digestion is equally wonderful. It pushes its inquiries eagerly in every direction ; its ever-

repeated demand is, "What is that?" and if it shows signs of a deeper curiosity by also asking "Why?" it is satisfied with the most superficial explanation, while it hurries on to new information. It is content to take everything in the form of facts, while the older and more trained intellect craves to see the reason and the bearings, and is averse to receiving aught that it cannot set in connection with truths already stored, or bring under categories already established.

To teach first, therefore, facts, items of positive knowledge, and then lead the mind on by degrees to their connections and relations, to generalizations and inferences, is the method that nature prescribes for imparting knowledge; and it is also the truly disciplinary method. It is a copy of that by which the highest results of knowledge have been gained, and it prepares both for appreciating and for adding to those results. The whole body of culture, in every department, is founded upon facts; they are the necessary mental pabulum by whose digestion is to be worked out in every mind, as it has been worked out in the history of the race, the complete organic structure of wisdom and culture. Those who jeer at "barren facts" as means of education speak without book. Every fact, of whatever kind, is in itself, indeed, a barren thing; its relations and consequences make it fruitful, but these are only to be reached after it is learned. For instance, we teach our children, in the way of discipline, to conjugate a Latin verb: what drier and more unattractive fact can be put before the mind of the young pupil than that a certain people of whom he knows nothing, at a time in the past of which he can form no conception, said *amo* when they wished to express what we express by *I love*? It is only the instructor who knows that the drudgery of acquiring such facts will be rewarded, by and by, by the results they will yield. The same is true of the multiplication-table, of the items of historical and geographical knowledge, of points of structure in plants and animals, of the details of constitution and properties in the substances about us. The mere piling in of knowledge, without making it lead on to something more and different, is as useless for discipline in any one of these departments as in the others. We do not, because the Latin verb is a valuable means of discipline, follow it up with the

Hungarian verb, the Basque, the Choctaw, although in itself, for an exercise in mental gymnastics, each of these last is as valuable as the first. We should as soon think, when the child has mastered the pothooks and hangers which are to train his hand duly for the formation of English letters, of proceeding to teach him the elements of the Arabic and Chinese alphabets, instead of carrying him on to English writing. If the time given to education were to be spent in training the intellect to perform certain processes deftly, without regard to the materials it dealt with, men would be turned out to the duties of life wholly unfitted to cope with them. You cannot put the judgment in position to act, without informing the mind ; give it upon any subject facts enough, duly arranged, and it will, with such force of insight as it naturally possesses, see their relations and draw the conclusions they suggest ; teach it not to try to act without the utmost possible collection and arrangement of its facts, and you have given it the most valuable lesson it can receive. We know and acknowledge in practice that the judgment is competent to deal only with matters in which it is well versed ; that is to say, where it knows thoroughly the facts involved and their relations, and is used to combining them. The greatest scholar is comparatively weak off his own ground, and, knowing his weakness, is modest and timid ; it is only the sciolist who, having obtained a smattering of knowledge in one or two departments, fancies himself capable of rendering a valuable opinion upon any point that can be brought before him. Our ordinary courses of education, including a variety of subjects and winding up with a degree and an exhibition, are too apt to be regarded as finishing instead of merely inceptive and introductory processes ; the graduate feels that he has been disciplined, that his judgment has been once for all trained, and may now be trusted to act as it should : and hence the crudity and emptiness — the vealiness, if we may be permitted the word — of commencement oratory in general ; hence, and from other like causes, that flood of talk beyond knowledge with which we, of all communities in the world, perhaps, are most mercilessly deluged. To counteract the tendencies that bring about this state of things, to teach the modesty and reserve of true scholarship, to keep alive

the youthful craving for facts, to repress the adult tendency to form opinions by examining and comparing other opinions, should be among the most cherished aims of an education that pretends to be disciplinary. The necessity and the art of thorough and independent investigation, what are the sources of knowledge and how they are to be consulted and used, and that in more than one department,— if the pupil's training has not taught him these, it is a failure. Nothing else can give a real possession of truth. For most of what we hold we are obliged to rely upon the authority of others ; it is out of our power even to review the processes by which it has been developed from its ultimate sources ; but a part of it we must have thus tested, and we must feel ourselves capable of testing the rest, or none of it is our own.

To make anything less than the whole existing and accessible body of human knowledge the groundwork of education, taken in the largest sense, is wholly inadmissible. All that we have received it is our duty to maintain and augment. Every part of it is valuable, capable of conversion to the uses of discipline and of leading to individual culture. Nothing that men know is so bare and dull that it does not deserve to be kept in mind, extended, and placed in new relations, and that it may not be made productive of valuable fruit. To ask what knowledge is disciplinary is the question of ignorance. The true question to ask is, What kind of discipline does any given knowledge afford, to what does it conduct, what preparation does it itself need in order to be brought profitably into the scheme of education, and what is its value for that general culture which should be the universal possession, or for any one of the departments of special training which have to be shared out among different individuals and classes ?

In the light of these considerations, we are prepared for looking to see what part the study of languages and of language is entitled to bear in our systems of education.

And we have first to notice that the acquisition of language is the primary and fundamental step in education. We learn our language, as truly as we learn mathematics or geography ; appropriating, by both processes alike, results wrought out by the labors of unnumbered generations. The power of speech

is a human capacity, distinctive and indefeasible, like the capacity of art, or the power to devise and use instruments, with both of which, indeed, it stands in essential connection ; but every language that exists or has existed is a constituent part of human culture, an institution, gradually wrought out under the pressure of human wants and human circumstances ; into its development have been absorbed the slowly gathered fruits of men's thought and experience, not less than into the development of the arts and sciences, only in a more intimate and unconscious manner. It started from rude and humble beginnings, as the simple satisfaction of a social impulse, the desire of men to communicate with one another ; just as the child, when he begins to talk, thinks only of conversing with those about him respecting the petty affairs of his childish world, and does not dream that he is at the same time equipping his mind and soul with an instrument which will enable them to grapple with all the problems of the universe. We do not easily believe that the speech we learn is something made by our predecessors for our benefit, because we are clearly conscious of our own little power over it, to extend, alter, or amend it. But this is simply the token and effect of the infinite littleness of our individual activity, as compared with the mass of all that has been done and is doing by others ; the insignificance of each of our predecessors was like our own ; but the sum of the infinite series of infinitesimals is the substantial product, language. We are ourselves a part of the force that is altering our present speech, and adapting it to the purposes of our successors, and there is no other force whatever in action to that end. He who should come out upon the arena of the nineteenth century equipped only with the English of the eleventh, would be as awkward and helpless as he who should enter into modern battle in the iron panoply of the same period, with lance in rest, and battle-axe slung at saddle-bow ; and our own English will be in the same manner, if not in the same degree, unequal to the needs of the intellectual combatant of eight hundred years hence. And if during the last period no influence has been exercised upon the language which did not proceed from its speakers, so neither in the preceding period, nor in the one before that, and so on, until the very beginning

is reached. There is not an item in the whole of human speech which these forces are not demonstrably capable of having produced ; not an item which the enlightened student of language feels compelled, or impelled, to ascribe to any other force.

It was necessary to insist at greater length upon this point, because there exists even in cultivated opinion so much confusion and error in regard to it. Many fail to distinguish between language as an endowment of human nature, or the power to speak, and language as a developed product and result of this endowment, or the body of words and phrases constituting a given speech. Language is far enough from being reason, or mind, or thought ; it is simply an acquired instrumentality without which all these are comparatively impotent, ineffective, and unmanageable gifts. Its acquisition has been one of the very earliest steps in the progress of humanity, and one universally taken, as universally as the production of at least rude tools and weapons, of articles of dress and means of shelter. No human tribe or race has ever been met with which had not been since time immemorial in the traditional possession of as much as this, although many a one has rested with this, and advanced no further.

The part, then, which language plays in the development of each individual is a reflex of that which it has played in the development of the race. It is the beginning and foundation of everything else. It is our introduction to the *macrocosmos* and the *microcosmos*, the world without us and the world within us. Life and its surroundings are present before the sense of the young child now as before that of the earliest speechless human beings ; but they are a bewildering phantas-magoria, into the understanding of which he has to work himself, as they did. In all the exercises of his nascent powers, he is led on and assisted by his fellows, mainly in and through language. With words are taught distinctions, classifications, abstractions, relations ; through them, observation is directed to the matters most calling for attention ; through them consciousness is awakened and exercised, and the reasoning powers are trained ; and he who has only learned to talk has fairly begun his education, outer and inner.

While thus the first instalment of our indebtedness for cul-

ture to the past and the present, language is the principal means of all the rest. It puts us in communication with our fellows, and makes our growth an integral part of that of the race, stretching our individual littleness into the larger dimensions of collective human nature. Almost all that is done for us by others, outside the narrow circle with which we come in personal contact, almost all, indeed, which is done within that circle itself, is done through language. And the same instrumentality, of course, is to serve us in the exercising of our influence upon others. The work we do for our contemporaries and our successors has to be performed, in great part, in and through language. Our receiving and our giving take place by one channel.

All this, however, may seem to have but little bearing upon the subject of education in the narrower sense of school work, of preparation made under instructors for the work of life. Of course, it will be said, every one must learn his own mother-tongue, as the foundation upon which everything else is to be built ; there can be no question as to the necessity of the discipline which its acquisition brings ; but it comes by a kind of natural and unconscious process ; it is very different from what is won by direct study. The objection is not altogether well founded. We are not prepared to inquire what the study of foreign languages is to do for us, until we have seen clearly what our own is worth to us, and how ; for the learning of a foreign tongue is but the repetition, under other circumstances, of the learning of our own ; and what fruit the one yields is of the same kind with that derived from the other. Great as is the difference of the two cases (consisting chiefly in the fact that that training of the consciousness and reasoning powers which is involved in learning to speak at all is done once for all, in the main, and does not admit of being repeated), it is one of degree and circumstance only. One language is in itself as much extraneous to our mental acts as another. As a part of acquired and acquirable culture, our speech is determined by the particular advantages which we enjoy. With a change of surroundings during childhood, we should have made French, or Turkish, or Chinese, or Dakota, our "mother-tongue," and looked upon English as the strange jargon which

we must acquire artificially. We may even now, if we choose, and if our present habits of thought and of articulation are not too firmly fixed upon us, make ourselves so at home in any one of the tongues just mentioned, that it shall become to us more native than English. There can be, therefore, no peculiar and magical effect derived from the addition to the body of signs for thought with which we are already familiar of another body of signs, used now or in the past by some other community ; it is simply a continuing and supplementing of the possession we already enjoy, — wealth added to wealth.

How far it is desirable or necessary thus to continue and supplement one's natively acquired possession will naturally depend, in no small measure, upon the amount of wealth gained with the latter. The Polynesian or African, for example, who should wish to rise to the level of the best culture of the day, could climb but a very little way by the help of his own dialect. When this had done its utmost for him, he would, though raised greatly above what he could have been without it, still be far down in the scale of human development, and with a sadly limited space for further growth opened to him. Let him add English to his possessions, and his horizon would be inconceivably expanded ; his way would be clear to more than he could ever hope to gain, though he devoted to study all the energies of a long life. What was thus made accessible to him by a secondary process, by education in the narrower sense, is made accessible to us by a first process, the natural learning of our mother-tongue. All that English could do for him it can do for us. It were vain to deny that true and high culture is within reach of him who rightly studies the English language alone, knowing naught of any other. More of the fruits of knowledge are deposited in it and in its literature than one man can make his own. History affords at least one illustrious example, within our own near view, of a people that has risen to the loftiest pinnacle of culture with no aid from linguistic or philological study : it is the Greek people. The elements, the undeveloped germs of the Greek civilization, did indeed in part come from foreign sources : but they did not come through literature ; they were gained by personal intercourse. To the true Greek, from the beginning to the

end of Grecian history, every tongue save his own was barbarous, and unworthy of his attention ; he learned such, if he learned them at all, only for the simplest and most practical ends of communication with their speakers. No trace of Latin, or Hebrew, or Egyptian, or Assyrian, or Sanskrit, or Chinese was to be found in the curriculum of the Athenian student, though dim intimations of valuable knowledge reached by some of those nations, of noble works produced by them, had reached his ear. What the ancient Greek could do, let it not be said that the modern speaker of English, with a tongue into which have been poured the treasures of all literature and science, from every part of the world, and from times far beyond the dawn of Grecian history, cannot accomplish.

We must be careful, however, not to hurry from this to the conclusion that there is no longer good ground for our studying any language save our own. We have, rather, only to draw one or two negative inferences. In the first place, that we must not contemn the man who knows no other language than his own as lacking the essentials of culture, since he may have derived from his English what is an equivalent, or more than an equivalent, for all the strange tongues we have at command. In the second place, that our inducement to study Latin and Greek, or any other such tongue, is very different from that which should lead our imagined Polynesian or African to study English. At the revival of letters, indeed, the classical tongues stood toward those of modern Europe in something such a position as one of the latter now to the Polynesian or African dialects ; they contained the treasures of knowledge and culture, which were only attainable through them ; hence, they were the almost exclusive means of discipline ; to study them was to learn what was known, and to lay the necessary foundation for further productiveness in every department. The process of change from that condition of things to the present, when the best and most cultivated modern languages are far richer in collected wealth than ever was either the Greek or the Latin, has been a gradual one, accompanying the slow transfusion of the old knowledge into new forms, and its increase by the results of the best thought, the deepest wisdom, and the most penetrating investigation of the past six or eight centuries.

The reasons why we may not imitate the ancient Greek contempt and neglect of foreign tongues are many and various, and sufficiently evident. In brief, our culture has a far wider and stronger basis than that of the Greek, including numerous departments of knowledge of which he had no conception ; history, and antiquity, and literature, and language itself, are subjects of study to us in a sense altogether different from what they were to any ancient people ; we have learned, moreover, that the roundabout course, through other tongues, to the comprehension and mastery of our own, is the shortest ; and we recognize other communities besides ourselves as engaged in the same rapid career of advancement of knowledge, and constantly setting us lessons which we cannot afford to leave unread.

Of these reasons, the last is the most obvious and elementary. Language is primarily a means of communication ; and as the possession of our native tongue gives us access to other minds, so the acquisition of more languages widens our sphere of intercourse, lays open additional sources of enlightenment, and increases the number of our instructors. Even were it possible that everything valuable that was produced abroad should find its way into English, it would yet be more promptly and better studied in the form in which it originally appeared. No one can claim to have ready access to the fountains of knowledge nowadays who has it only by the channel of his native speech.

The important bearing of the study of foreign languages and literatures upon that of our own is also universally recognized. It has become a trite remark, that no one knows his own tongue who knows no other beside it. Our native language is too much a matter of unreflective habit with us for us to be able to set it in the full light of an objective study. Something of the same difficulty is felt in relation also to our native literature ; we hardly know what it is and what it is worth, until we come to compare it with another. No doubt this difficulty admits of being measurably removed by other means ; but the easiest and most effective means is philological study. This supplies us the needed ground of comparison, and brings characteristic qualities to our conscious apprehension ; nothing

else so develops the faculty of literary criticism, and leads to that skilled and artistic handling of our mother-tongue which is the highest adornment of a natural aptitude, and is able even in no small degree to supply the place of this. He whose object it is to wield effectively the resources of his own vernacular can account no time lost which he spends, under proper direction, in the acquisition of other tongues. Nothing else, again, so trains the capacity to penetrate into the minds and hearts of men, to read aright the records of their opinion and action, to get off one's own point of view and see and estimate things as others see them. Those who would understand and influence their fellows, those who deal with dogma and precedent, with the interpretation and application of principles that affect man most nearly, must give themselves to studies of which philology is a chief means and aid.

When it comes, however, to the question of deeper investigations into human history, in all its branches, then the necessity of a philology that reaches far beyond the boundaries of English becomes at every turn most clearly apparent. No part of our modern culture—language, literature, or anything else—has its roots in itself, or is to be comprehended without following it up through the records of its former phases. The study of history, as accessible especially in languages and literatures (in a far less degree in art and antiquities), has become one of the principal divisions of human labor. No small part of our most precious knowledge has been won in it, and has been deposited in our own tongue, even entering to a certain extent into that unconscious culture which we gain we hardly know whence or how. But while its results are thus accessible even in English, so far as may serve the purposes of general culture to one whose special activity is to be exerted in a different direction, that kind of thorough mastery which has been described above as needed to make knowledge disciplinary is not to be won in this manner. How tame and lifeless, for example, is his apprehension of the history of English words who looks out their etymologies in a dictionary, however skilfully constructed, compared with his who reads it in the documents in which it is contained! Again, the general truths of linguistic science, having been once wrought out by the

study and comparison of many tongues, are capable of being so distinctly stated, and so clearly illustrated out of the resources of English, as to be made patent to the sense of every intelligent and well-instructed English scholar ; yet only he can be said to have fully mastered them who can bring to them independent and varied illustration from the same data which led to their establishment. And the case is the same with all the elements that make up our civilization ; while there is a primitive darkness into which we cannot follow them, they have a long history of development which must be read where it is found written, in the records of the many races through whose hands they have passed on their way to us. The work is far from being yet completely done ; an inexhaustible mass of materials still remains to be explored and elaborated ; and men have to be trained for the task, not less than for the investigation of material nature.

These are, in brief and imperfect statement, the leading principles by which is to be tested the value of philology in general, and of each particular language, as a means of education. And first, as regards the languages most nearly allied with our own in character and circumstances, namely, those of modern Europe, it is to be noted that they are especially our resort as sources of positive knowledge. Yet with certain of them, notably the French and the German, our connections are of the higher and more philosophical as well as of the lower and more practical character. Some of our prominent branches of thought have to be followed up to their roots in the French and German literatures. These, too, are by their beauties and peculiarities fitted to furnish the ground of comparative literary study ; and the same advantage is possessed by the structure and usages of the languages themselves,—an advantage heightened by the historical relation they sustain to English. Had we nothing else with yet stronger recommendations to apply to, the German and French, especially the former, would answer to us all the essential disciplinary purposes of philological study ; as, indeed, to many they are and must be made to answer those purposes. As the case stands, they are among the indispensable parts of a disciplinary education ; he who quits school and enters upon the active work of life without

mastering either or both of them cannot claim to have enjoyed the benefit of a liberal training.

The other modern languages stand off around these in ever more distant circles of relation to our education ; some challenging a place almost as near ; others interesting only the special student of literatures, the professed philologist ; yet others, only the special student of languages, the scientific linguist. Each, in its own manner and degree, is worthy to be studied ; each has its own contribution to make to that wider foundation of valuable knowledge on which is to be built up the higher culture of the future.

So also with the ancient languages, the extant records of the men of olden time. There is no fragment of such record, from whatever part or period of the world, which has not its claim upon the attention of the present age. And that the claim is recognized is fully attested by the acute and successful attempts which this century has seen made upon the secrets of lost tongues and long-buried monuments. The Egyptian, the Persian, the Ninevitic remains are but the most conspicuous among the many trophies won by the scholarly zeal of our time. A host of languages are now regularly professed in the highest institutions of learning which our ancestors either knew naught of or regarded with something of the contemptuous feeling of the Greeks toward the barbarians. These, too, have their various positions of importance, according to their intrinsic value, or the relations they sustain to our interests. Some, like the Egyptian and Zend, have come down as fragments merely, casting light upon ancient and perished civilizations, or illustrating the interconnections of races. Some, though possessing abundant and valuable literatures, are withdrawn from our sympathies by their peculiarity of structure, and the isolation of the culture they represent. Such is the Chinese ; to the merits and claims of which, however, we are at present far from doing justice. Yet others, in place almost equally remote, are brought near by ties of another kind. Such is the Sanskrit, which, on the score of its literature, its institutions, the people speaking it, is hardly more to us than Chinese ; but which has over the latter an immense preponderance as being of our own kith and kin, and also the most

primitive and unchanged of the tongues which own a common origin with ours and with those others, in ancient and modern Europe, which most interest us. In all that concerns the history of development of these tongues, and even the history and science of language in general, it stands pre-eminent. Hence the prominence it has so suddenly assumed in the systems of higher education. In this country, forty years ago, one who knew aught of it would have been a spectacle; now they are to be counted by hundreds who have found out that to the philologist Sanskrit comes next in importance to Latin and Greek, and who have made some knowledge of it their own.

As from China and India we come westward toward Europe, we meet with languages which are invested with interest as being connected with that grand historic movement whose direct issue is our modern civilization. This, to us, is a consideration outweighing in consequence all others. The history of our own culture, and of the nations which have contributed to it, is, in our apprehension, almost the sum and substance of all history; it is often called outright "universal history," though by a usage that is open to criticism, since it seems too oblivious of the claims of that larger part of mankind who would thus be denied to have had a history. Of the so-called Oriental literatures, the Arabic, especially, owns a subordinate share in this kind of importance, besides that which belongs to it in other respects, because the Arabs were in some measure middle-men between modern Europe and the classic past. There is another tongue, the Hebrew, akin with the Arabic, whose intimate connection with one of the main elements of our civilization, our religion, might seem to challenge for it a more conspicuous place among our subjects of study than is actually allowed it. But the earliest Christian authorities are Greek, not Hebrew; Christianity passed so soon out of the charge of the Semitic races, that the fathers and founders of our general civilization, the Greeks and Romans, became the founders and Fathers of the Church. Its history was removed from the original Hebrew basis and established on classic ground, and the Hebrew language has not maintained a widely acknowledged practical value; few besides theologians think it necessary to read the Old Testament in its own tongue. The narrow com-

pass and unique character of the literature, and the real remoteness of both language and race from ours, have helped to bring about this result.

We come finally to consider the two classical languages. Here we have not to cast about to discover their peculiar claims upon us; in nearly every department of value of which we have taken note, they stand uncontestedly first. Thus, especially, in regard to that most significant item of all, the history of our culture. In Greece and Rome are the beginnings of nearly all that we most value. They are like the twin lakes in which the Nile has its origin; the mountain torrents which centre in these, to issue in that majestic stream, are by comparison hardly worth our attention. Our art, science, history, philosophy, poetry,—even, as has just been shown, our religion,—take their start there. There is, as it were, the very heart of the great past, whose secrets are unlocked by language.

This is the firm and indestructible foundation of the extraordinary importance attaching to the study of the classical tongues. Nothing that may arise hereafter can interfere with it; Greek and Latin, and the antiquity they depict, must continue the sources of knowledge as to the beginnings of history, and be studied as long as history is studied.

But they have also other advantages, which enhance their title to prominence in education. The Greeks and Romans are, in their intensity of action and influence, the two most wonderful communities which history exhibits. Their literatures, in nearly every department, offer unsurpassed, if not unequalled, models of composition, where vigor of thought, fertility of fancy, and elegance of form are present in equal proportion. And as regards the languages themselves, while we would avoid any controversy touching the relative merits, considered as instruments of human thought, of these and of the most highly cultivated modern tongues, we may at least assert, without fear of contradiction, that the former, the Greek especially, are the most perfect known specimens of the synthetic type of speech,—a type through which our own English has passed, on its way to its present condition. Indeed, if we take the suffrages of the great scholars of the world as those of the Greek generals were taken after the battle of

Salamis, we shall hardly escape concluding its absolute pre-eminence, as the superior conduct of Themistocles in that fight; for each one, if he set his own native speech first, will rank the Greek as clearly second. Between the classical tongues and the English, once more, there exists a direct affiliation. What part of our stores of word and phrase comes directly from the French comes ultimately from the Latin; and, in our resort to the sources, we cannot stop short of the Latin. Another part comes directly from this language and from the Greek; and to the same fountains we habitually resort for the satisfaction of our daily arising needs of expression. The thorough student of English speech, not less than of English literature and institutions, must go to Greek and Latin for much of his most valuable material.

These are matters too familiar to have required to be touched upon otherwise than lightly. But, great as is their consequence, they do not entirely explain the position given to the classics in our general scheme of disciplinary education. One or two circumstances of a more adventitious character exercise an influence in the same direction. Thus, in the first place, ever since the revival of letters, a considerable share of the best human effort has been given to study of the classics; to their elucidation has been devoted, with lavish expenditure of time and labor, ability of the highest order, acuteness the most penetrating, critical judgment the most sound and mature. An immense store of the results of human thought is deposited in the literature bearing upon them. Every item of classic lore has been so turned over and over, placed in so many lights and reflected in so many minds, that it is, so to speak, instinct with culture. Culture breeds culture; the bare items of knowledge become efficiently cultivating when superior minds have set them in order, combined them, and shown to what they lead. The fruits of this extreme elaboration are visible in every part of the classic field. No other tongues have had their phenomena and laws so exhaustively exhibited; nowhere has the whole life of an ancient people been so laid open to view, in its grand outlines and its minute details. Hence, all students of antiquity have gone to school to classical philology in order to learn how to investigate the past; how, shaking off the cling-

ing prejudices of their modern education, to live with long-gone races as if of them. In this respect, also, the classics are the training-ground of history.

In the second place, there is another way in which culture has tended to breed its like. Classic study still inherits a little of the feeling of times when it was the exclusive means of a liberal education, when only he who knew Latin and Greek knew anything, and he was most truly learned and cultivated who knew most of them. Classical scholars were long the sole body of educated men ; and they yet constitute the most influential and powerful guild of the educated, with perhaps an inkling of a disposition to look down unduly upon those who have not been initiated into their body, and do not know their passwords. In the general opinion, a man is more set down by inability to understand a classical allusion, or directly appreciate the force of a new word from the Latin, than by a betrayal of ignorance on many a topic of more essential consequence. Now it is indeed a matter of great moment to be in intellectual sympathy with those whom we admire, to meet them on common ground, discuss common subjects with them, and fully appreciate what interests them. And from this sympathy is derived a perfectly legitimate enhancement of the worth of classical study ; only one that is liable to be exaggerated, and perverted to the service of narrow-mindedness and pedantry.

That the value of a study of the classics is by its advocates often put on false grounds and overrated may not be denied ; and such error and exaggeration has the natural effect to provoke opposing injustice from the other party. The sooner it is acknowledged that Greek and Latin philology simply forms a branch of general philology, with very special claims to our attention, differing not in kind, but only in degree from those of other branches, and depending on qualities which are in every particular capable of being distinctly defined and exactly weighed, the better will it be for the cause of education, and for harmony among educators. There cannot, as we have already seen, ever come a time when these languages will not occupy a leading place among our disciplinary studies ; but as they have long since been cast down from their former rank as sole means of discipline, so they are still losing ground rel-

atively, and must continue to do so in the future, by the inevitable operation of natural causes. Of their more adventitious recommendations (as we have called them above) they will be measurably stripped, by the rapid accumulation of the results of human labor in other departments of knowledge and the growing consciousness of strength in the laborers there ; while even their most essential merits must slowly fade ; for the more of human history and of human productiveness we leave behind us, the less comparative importance can belong to any particular period of the one, to any particular fruits of the other. So long as education is founded on knowledge, and as knowledge increases, the educational value of each single department and body of knowledge must diminish.

It is instructive to note the change of aspect which classical study has undergone since its uprisal,—a change analogous with that which each individual undergoes toward his teachers, toward the whole array of enlightening influences from without. Men went to Greece and Rome at first as the repositories of higher knowledge, for authoritative instruction. Then, as they gained independence of judgment, founded on the possession of what their instructors had known and their own further acquisitions, a new spirit began to show itself, that of criticism. This is the spirit which dominates in all modern philology, in every department. It implies simply that we appeal to the past no longer as an authority, but as a witness ; we listen to it with respect, even with reverence, but without obsequiousness, mindful that no witness is implicitly to be trusted, and that the truth is to be won only by cross-examination and the confrontation of testimonies. We take no man's dictum on any point without questioning his right to give it ; we strive to put ourselves in his position and see from his point of view, in order to understand him, and estimate what he says at its real value. This is *scepticism*, in the good, etymological sense of the term, the determination to *see* with our own eyes whatever lies within our sphere of sight, instead of letting others see for us. Familiar examples of its effects are to be seen in our treatment of the traditional history of early Rome, to credit which is now as rare as to doubt it was rare a century or two since ; and in our discussions of the person-

ality of Homer, which we recognize as a point not to be settled by the opinion of antiquity, but through the most penetrating study of the Homeric poems, along with an investigation of the conditions under which like works have appeared elsewhere.

In the strictest accordance, now, with this distinctive spirit of modern philology is the whole spirit of modern science, so called. The latter recognizes all culture as founded on the basis of positive knowledge, all knowledge as valuable, and observation and deduction as the only means of arriving at knowledge. And it applies itself to examining those same sources of knowledge to which men in all ages have had recourse, questioning them with such success as they could command. It rests contented with no opinion or conclusion standing on a foundation that admits of being widened and deepened. Hence the busy observation and experimentation, the collection of facts, the inductions, generalizations, combinations, inferences, applications, with which the world now teems ; hence the springing up of one new science after another. In all this there is no materialism and utilitarianism, in any bad sense of those words ; command of the forces of nature and their reduction to the service of man's well-being do, indeed, result from it at a rate far beyond what other times have known ; but this is an accompanying advantage, and a signal one. The higher utilities rest upon the lower, and grow out of them. There need not be, and is not, less of the pure love of knowledge and of all its loftier uses in the study of nature than in that of human history ; nor is the truth reached by the former of a different kind of value, or less expanding to the mind. The enlargement of the whole ground-work and structure of cultivated thought brought about by modern astronomy, geology, and chemistry is greater than could have been effected by the old philosophy in as many thousands of years as these have lived centuries. The dignity of a branch of study does not depend upon the nature of what it deals with, but is proportioned in part to its utility, in part to the quality of work requisite for it, the amount and style of its necessary preparation, and the degree of ability demanded for its successful pursuit. The man who fails to understand and value

science is not less a specialist, and of defective culture, than he who cannot appreciate philology, or history, or philosophy.

Nothing, therefore, can well be more unfortunate for the cause of education than that misunderstanding should prevail between the representatives of two departments of study so nearly agreeing in both object and method, which are not antagonistic, and hardly even antithetical, but rather supplementary, to one another ; nothing sadder than to hear, on the one hand, the works of man decried as a subject of study compared with the works of God, as if the former were not also the works of God, or as if the latter concerned us, or were comprehensible by us, except in their relation to us ; or, on the other hand, to hear utility depreciated and facts sneered at, as if utility were not merely another name for value, or as if there were anything to oppose to facts save fictions. Men may dispute as to which is the foremost ; but it is certain that these are the two feet of knowledge, and that to hamper either is to check the progress of culture. Each has its undesirable tendencies, which the influence of the other must help to correct ; the one makes for over-conservatism, the other for over-radicalism ; the one is apt to inspire a too credulous trust to authority, the other, an overweening self-confidence, a depreciation of even rightful authority, a contempt for the past and its lessons. Both alike have an imperative claim to our attention, and upon their due combination must rest the system of education, if it would be indeed disciplinary.

Into the more practical question of what constitutes their due combination we do not here enter, having undertaken to speak only of some of the principles that underlie its settlement. What part of philological training shall be given through the English, the other modern tongues, or the ancient ; how we are to avoid cram, and give that which, instead of obstructing or nauseating, creates the capacity and the desire for more ; how to adjust the details of a proper compromise between the general and the special discipline and culture, — these are matters demanding the most careful consideration, and sure to lead to infinite discussion, since upon them the differences of individual taste, capacity, and circumstance must occasion wide diversities of opinion.

In conclusion, we will only repeat that those differences themselves have to be fully allowed for in our systems ; that we may not cut out too strait-laced a scheme of study, to be forced upon all minds ; that in an acknowledged course of compromise and selection it were foolish to exact uniformity ; that we should beware how much we pronounce indispensable, and how we allow ourselves to look down upon any one unversed in what our experience has taught us to regard as valuable, since he may have gained from something else that we are ignorant of an equal or greater amount of discipline and enlightenment. Let us, above all things, have that wisdom which consists in knowing how little we know ; and, as its natural consequence, the humility and charity which shall lead us to estimate at its utmost value, and to respect, what is known by our fellow.

W. D. WHITNEY.

ART. V.—FRENCH AND GERMAN DIPLOMACY AFTER SADOWA.

THERE can be few more valuable historical studies than the process by which the people of two great nations grow into antagonisms such as those which led to the recent conflict between France and Germany. Whatever may have been the first impressions excited by the outbreak of hostilities, it is now perfectly clear that the war was not the result of any mere spasmodic madness or desperation of Napoleon. However it may have been with the people of Germany, there can be no reasonable doubt that the masses of the French entered into the war without reluctance, if not indeed with universal enthusiasm. It may be doubted whether the Emperor was ever more popular with the nation at large than on the day when he threw down the gauntlet and made all further postponement of the struggle impossible. The growth of French hostility has been commensurate with the growth of Prussian power. So long as Prussia occupied a purely subordinate position in European politics there was no occasion for any display of hostility, even if hostility existed. But after the battle of Sadowa everything was changed. Then it became apparent that all the smaller

states of Germany, which up to this time had been essentially independent, were rapidly converging, if not upon Prussia, certainly upon a powerful central government of which Prussia was the head, and the result was the awakening of such a hostility on the part of France as afforded the most substantial grounds for alarm. The political antagonism which thus began in trifles, and ended in a desire to seize upon any pretext for war, has a history which may be studied, and which perhaps may not be without its useful lessons.

The wars of Napoleon I. made it evident that every member of the European family of nations needed protection against France. It was felt that, after Leipzig and Waterloo, France, at no very distant day, might, and probably would, seek a revenge; and the conditions of the Treaty of Paris were fixed with a view to make such a vengeance impossible. By this treaty, the French were made to feel a degree of humiliation, inasmuch as the balance of power, which it established, was known to be solely in the interests of those nations with which France had just been at war. In fact the treaties of 1815 were but little more than a solemn warning to France, that in the future she could not disturb the existing relations of Europe without incurring the hostility of all the allied powers. The restrictions thus laid upon a spirited nation could not but weigh heavily. As time wore on, and the necessity of these restraints became less apparent, it was not strange that the French desired relief, and that from time to time they made their desire manifest.

While general considerations of this nature were enough to create a public opinion in the country at large, there were reasons of more than ordinary force which made the treaty odious to the Emperor Napoleon III. The causes of this intensity of feeling would not be difficult to trace, but for our present purpose the fact without its causes is sufficient. At Auxerre, and indeed on other occasions, the Emperor did not hesitate to give free expression to his impatience. Inspired by such a desire to break up, in one way or another, the obnoxious treaties of 1815, he could not but regard the German question as peculiarly opportune; inasmuch as, whatever might be the issue of the war, the obligations of those treaties would no longer be of

any binding force. The question, therefore, opened the most inviting field for the efforts of French diplomacy. Apparently there was everything to gain and nothing to lose.

It was with this question looming up across the Rhine that Napoleon began the political work of 1866. There is abundant evidence that he entered upon the labors of the year with somewhat more than his usual confidence. In the address with which on the 22d of January he opened the session of the Chambers there is conclusive proof that imperialism was strong, perhaps it would not be too much to say, defiant. The external relations of France the Emperor regarded as in every respect fortunate. After commenting upon these relations somewhat at length, he proceeded to discuss in language that could not be mistaken the policy that was to be pursued at home. This Constitution, of 1852, which had been opposed by all liberals, and which even many friends of the Empire had consented to only from a necessity which they believed to be temporary, was referred to in words of most extravagant eulogy. This Constitution, always so obnoxious to the more thinking of the liberty-loving people of the nation, was indorsed as a happy and final conciliation of authority and liberty. It was referred to as embodying the great excellences of the Constitution of the United States, and as differing from that of Great Britain only for the better. In short, the address was a glorification of absolutism. By those who had hoped that the government earnestly desired to enter upon a work of genuine reform, the Emperor's words were listened to with blank despair; by those whose lives had been devoted to freedom they were heard with defiance.

These sentiments of the Emperor, so obnoxious to the friends of liberty in the lower house, appeared all the more significant when followed by the speech of Persigny, in the Senate. The words of this high official were scarcely more than a *rechauffé* of the language of the Emperor, of course with the appropriate reasoning. An elaborate comparison was drawn between the constitutional monarchy of England and that of France, and the conclusion was reached that, for democratic and centralized France, such a parliamentary *régime* as places the authority in the hands of a ministry that is constantly attacked and often

overthrown, could not but result in the most fatal disasters. The trifling debate on the subject which occurred in the Senate is chiefly valuable as showing the almost perfect unanimity of the senators in support of the government.

But the people could not suppress their apprehensions. They had not long to wait for a better knowledge of the Emperor's purpose. On the 1st of February a note appeared in the *Moniteur*, calling attention to the forty-second article of the Constitution,— the obnoxious article which prohibits all publication of the legislative debates save the official reports.* The peculiar significance of the note was in the fact that for a considerable time the article had been allowed by the government to remain inoperative. This had been almost a matter of necessity. So furious had been the outcry, that the prime minister had been obliged to declare that the government did not question the right to discuss and pronounce upon the debates. But any free discussion under the forty-second article was manifestly impossible. If vigorously enforced, the constitutional provision would condemn all the journals either to absolute silence, or to the constant liability of arrest. The government, therefore, without initiating any change in the Constitution, had allowed the obnoxious article to fall into disuse. But the publication of the note of February 1st evidently indicated an intention to revive the constitutional provisions and to enforce them. The note was published, by imperial dictation of course, and was everywhere regarded as evidence of imperial rigor. But it was soon evident that the Emperor had made no very great mistake in estimating public opinion. For, although the question brought into play all the best orators of the lower house, although the logic of poor Persigny was torn into shreds and scattered to the winds by the merciless eloquence of Thiers, yet, whenever there was a division, it was but too apparent that in the Chambers the imperial party was in strong majority, while in the Senate it was wellnigh without opposi-

* The authorized reports were made out in two forms; the one verbatim, the other abridged to the liking of the officials. Any journal, therefore, which chose to present anything of the discussions to its readers must either publish every word uttered, or must be content to print the government abridgment alone.

tion. Thus at the very time when the affairs of Prussia and Austria were ripening for war and were inviting the interference of French diplomacy for the purpose of preventing it, the miniature contest at the French capital had terminated in favor of the government. Although the renewal of the press laws was immensely unpopular, it has to be admitted that the act was not sufficient to shake for a moment either the strength or the confidence of the Emperor. There can be no doubt that, from the unequivocal support which was thus given to imperialism by the legislature, the German policy of Napoleon received much encouragement, if not much of its original inspiration.

The occupancy of the Duchies of the Elbe by Prussia and Austria came up for discussion in the French Chambers on the 2d and 3d of March. The leaning of French sympathy toward Austria was unmistakable. In the discussion the course of Prussia met with almost unanimous reprobation. And yet in the end it was manifest that the policy of the deputies was identical with that of the Emperor,—strict neutrality. In the address to the throne which was finally adopted, there remained not a single trace of that unanimous opposition to Prussia which had been so conspicuous in the debate. Whatever might be the sympathies of individuals, it was thought of the highest importance that the official declaration of the house should give offence to neither party. The address was simply approbation of neutrality in the past, complete liberty for action in the future. The nation must not have her future embarrassed by any indiscreet word uttered in the present.

There seems to be but one way of explaining the fatal policy of the imperial government in regard to the war of 1866. Nothing but a firm belief that his own judgment in the matter was infallible would appear to account for the extraordinary course which the Emperor pursued. That he was willing to stake everything on the confidence with which he awaited the most complete ultimate success of Austria, there is now abundant evidence. It was manifestly not for the interest of France that either party in the contest should be so overwhelmingly victorious, as to be able to consolidate Germany under a single crown. France had, therefore, no word of opposition to raise if the

weaker party desired to seek foreign alliance. The imperial logic would appear to have been this: Prussia is so manifestly wrong in her aggressive policy, that she can gain no considerable support from the smaller German states; and she is so manifestly weak in comparison with her enemy, that, without the alliance of Italy, she will either not venture into the war, or, if she venture, will emerge from it in a thoroughly crippled condition. But whatever may have been Napoleon's reasoning, it is certain that no objection was interposed to prevent the alliance of Prussia and Italy. The fact has tenfold significance in the circumstance that at the time Italy was so completely under French influence, not to say under French control, that a single whisper of disapproval by the Emperor would have brought the negotiations instantly to a close. Moreover, that Napoleon felt sure of his game is indicated by the course which he had taken at the celebrated interviews with Count Bismarck at Biarritz. Whatever the precise character of those conferences may, in the end, turn out to have been, it is quite certain that the Prussian minister was, at the time, anxious to secure the favor of France; and it seems quite probable, though it may not be affirmed, that he offered to the Emperor an extension of the Rhenish frontier in consideration of French support to the schemes of Prussia.* The treaty which was drawn up in the handwriting of Benedetti, and published by Bismarck at the beginning of the late war, gives to such a supposition a decided coloring of truth; for it is hardly possible to suppose that such a treaty was drawn up by the French minister without previous conference and encouragement. The truth in all probability is, that when Prussia was no longer in need of French assistance, she rejected summarily, as too late, substantially the same propositions which Bismarck had previously made to the Emperor and which the latter had declined in hope of getting still better terms in case of Prussian disaster.

* That such an offer was made to Napoleon by Bismarck was boldly asserted by Garnier-Pagès in the *Corps Legislatif*, and was not denied. The same assertion is made in the recent brilliant, but, for the most part, visionary, pamphlet of M. Renouf on the *Diplomacy of Bismarck and Napoleon*. In all these negotiations, the papers of importance seem to have been left in Prussian hands; the world will, therefore, have to wait for the facts until it is for the interest of Prussia to reveal them.

Thus, although the policy of the French was a carefully elaborated one, everything went as Prussia desired. The neutrality of Russia had been easily secured ; Italy was bound into a firm offensive and defensive alliance ; while France stood proudly aloof, evidently expecting that the war would be long and evenly balanced, and that, at the seasonable moment, she could step forward as arbiter of the dispute and secure for herself the reward she coveted. It is difficult to conceive how any policy could have been weaker than that of the French ; for, in case of a decisive victory on either side, the victorious party would be in no mood to hold out a reward for an arrest of its success, and the vanquished would be in no condition to do so, whatever might be its desires. The conclusion to which one is driven is, that Napoleon believed the parties, now that Italy had thrown herself into the Prussian scale, to be so evenly balanced as to make an overwhelming victory on the side of either quite out of the question.

But the Emperor not only showed great diplomatic incapacity in his policy, he displayed still more remarkable weakness in closing up his line of retreat. There can be no question that a most invaluable art in diplomacy is that of a discreet silence. Bismarck has repeatedly shown that this art is by no means incompatible with the utmost diplomatic frankness. But Napoleon seemed determined not only to adopt a weak policy, but also to proclaim it in such a way as, in case of failure, to make the failure as conspicuous and ridiculous as possible. At the very moment when, of all times, the Emperor should have been silent, that is, non-committal, he made the blunder of proclaiming his policy to the world. Only three weeks before the Austrians lost their army and their cause at Sadowa, Europe was made to understand that France would expect an extension of her boundary in case the equilibrium of Europe should be disturbed. This was not held out as a threat, merely ; had such been the fact, it might have presented the shadow of an excuse. It was simply a proclamation of what the French ambassador would have been authorized to declare, that is, of what *would have been threatened*, had the difficulties of Austria and Prussia been submitted to a conference of the German states, as Napoleon had recommended.

This famous letter of the 11th of June, which the Emperor addressed to his prime minister, received but one interpretation. In France, as well as in Germany, it was declared that there was as much reason for such a demand at the time the letter was written as when the conference was to have been held; therefore the letter could only be understood to mean that, whatever might be the issue of the contest, France would demand a suitable reward as the price of her neutrality.

Thus the French government was fairly committed to a policy by its own gratuitous declaration. Moreover, it was a policy from which there could be no retreat without something of humiliation, if not of disgrace, in the eyes of the French people. The government, of course, anticipated no need of a retreat. As the anticipations and the purposes of Napoleon appear to have been formed with all the assurance of self-conscious infallibility, no one in Europe could have been more surprised than he at the result of the Prussian advance into Bohemia. But when the disaster came there was no time for hesitation, no time for the development of a new policy. The very day after the Austrians were routed, Francis Joseph ceded Venetia to Napoleon and prayed for his friendly mediation. It could not be declined, of course, for the defeat had been so overwhelming that nothing but an immediate interference would save the Austrian capital. And yet it was evident that the matter was hedged about with the greatest difficulties. On the one hand, there was a formidable party in Italy which insisted that Italian honor could not be satisfied without a direct cession of Venetia, while, on the other, Prussia was in condition to lose by an unsuccessful armistice much of the tremendous advantage which had been gained by the battle. How very desperate the situation was is shown by the fact that before the first preliminaries of an armistice could be arranged, the Prussian troops had overrun Bohemia and much of Bavaria, had taken possession of Frankfort, and the vanguard were already in full view of the spire of St. Stephen's. Under these circumstances, whether an armistice could be secured depended entirely upon Prussia. It was apparent, not only that the war must either be speedily arrested or Austria completely crippled, but also that the terms demanded by Prussia would

become daily more severe just in proportion as her own strength and her enemy's weakness became more conspicuous. The victorious army could not be expected to compromise its military advantage, and therefore nothing short of categorical assurances could lead to an armistice. When the matter was presented by the French government, therefore, the answer of Prussia was immediate and decisive. While there was every disposition to favor the restoration of peace, there could be no thought of armistice, until the mediatorial party made known the fundamental conditions on which a treaty might be negotiated. Prussia did not hesitate to say, without any circumlocution, that, as the first condition of peace, Austria must be excluded from the German Confederation, and must consent to the formation of a new union, with Prussia at its head. The terms were severe, but the situation was desperate, and was daily becoming more desperate. The advance of the Prussian army warned them that, if the terms were not consented to at once, a treaty would have to be signed in Vienna instead of Prague. Had circumstances allowed an armed intervention on the part of France, the situation might have been somewhat relieved. But such intervention was out of the question, for the double reason that the French army was in no condition to take the field, and the French relations with Italy were of such a nature as to make the employment of force in the matter next to impossible. There was nothing to do, therefore, but to submit. The best that France could accomplish was to bind Prussia not to destroy the autonomy of Saxony, and to allow the states south of the Main to form a South German Union in case they should desire to do so. As for the rest, the treaty gave to Prussia everything which she desired.

For the part which Napoleon took in bringing the war to a close no reasonable man will be disposed to condemn him, or even charge him with weakness. It is difficult to see how, after the battle, the wisest statesmanship could have secured better terms for the vanquished. And yet after every good word is said in praise of his part in framing the conditions of the treaty, the fact still remains that the end had come in a manner that had completely revolutionized the political rela-

tions of all the continental governments. If the Emperor had been committed to no policy, he might have accepted the hegemony of Prussia, if not with entire good-will, certainly without any outward betrayal of disappointment or chagrin. But in the fatal letter of the 11th of June he had not only expressly disclosed that the desire of France was that Austria should maintain her place at the head of Germany, and that the other states should remain for the most part *in statu quo*,* but also that any disturbance of the present equilibrium would be regarded as a sufficient cause for the readjustment of the Rhenish frontier.† All of the three conditions on which the Emperor in effect had declared that he should found his claim to an extension of frontier had been fulfilled. Austria had been thrown completely out of the German Empire, the map of Europe had been modified for the benefit of Prussia, and all the smaller German states had been either immensely weakened or completely destroyed.

In the light of these facts, there were evidently but two straightforward paths to pursue; either to push for an advance of the boundary line, or to acknowledge that the imperial diplomacy had been outwitted. The Emperor was in no condition to press his claim, and therefore to present it would make the French situation simply ridiculous. But to acknowledge a diplomatic defeat, in a matter of such supreme importance, would endanger the dynasty, and was not to be thought of. Both of these direct courses were therefore rejected. Until the French army could be put into a condition to enforce its claims, the people must be hoodwinked into a belief that the situation was not, after all, so very undesirable.

The first measure for the attainment of these ends was an effort to make a scapegoat of M. Drouyn de Lhuys. Although completely innocent of the imperial policy, save that he had received the imperial letter, the prime minister was summarily

* The language of the Emperor was as follows: "Nous aurions, en ce qui nous concerne, désiré pour les états secondaires de la confédération *une union plus intime, une organisation plus puissante, un rôle plus important*; pour la Prusse, plus d'homogénéité et de force dans le nord; pour l'Autriche, le maintien de sa grande position en Allemagne."

† "Nous ne pourrions songer à l'extension de nos frontières *que si la carte de l'Europe venait à être modifiée au profit exclusif d'une grande puissance.*"

dismissed, evidently enough for the purpose, on the part of his master, of creating the impression that, if any blunder had been committed, it was to be charged to the account of the minister alone. The dismissal, moreover, would afford an opportunity of declaring through the successor the prospective policy of the government. The peculiarities of the declaration that was actually made can be best understood after one has examined the progress of events in Germany.

No sooner had the result of the struggle at Königgrätz become known, than its importance began to be everywhere felt. Europe at large had to recognize the fact that a new power of the very first magnitude had sprung into existence, and that in the future no international policy could be adopted without regard to its wishes. Moreover, the energy and wisdom of Prussian diplomacy, in using the victory and in caring for the external relations of the country, were no less extraordinary than the success of the army. There was no occasion for any such apprehension as had inspired the celebrated toast of Blücher in 1814, "that the pens of the diplomatists might not undo what had been accomplished by the swords of the soldiers."

Thus with every tendency in its favor, the Prussian government entered upon its work of consolidation. In the king's message of the 17th of August the considerations in favor of absorption were concisely presented. It was argued frankly that, in case the smaller states should insist upon preserving their autonomy, they would be helpless in the event of any collision between themselves and Prussia, while, at the same time, their geographical position would present difficulties and obstructions in the way of their enemy that would far exceed in importance the amount of their actual power. It was not, therefore, from any covetousness of territory, urged the king, but from an obligation, on the one hand, to protect the state which he had inherited, and a desire, on the other, to give to new Germany a broader and firmer foundation, that the necessity arose for uniting the smaller states firmly and forever with the Prussian Monarchy. There was no resisting such an argument as this when it was supported by the power and prestige of Prussia, and accordingly Hanover, Electoral Hesse, Nassau, Frankfort, and Schleswig were obliged to yield.

The advantage derived by Prussia from this absorption of territory was not, of course, merely material. It was of vast importance that the population was increased from eighteen millions to twenty-four millions, and that the "sprawling configuration" of Prussia was transformed into a shape at once symmetrical and compact; but of far greater importance was it that by this increase of material power, and by the wisdom of subsequent statesmanship, the nation was able to form such alliances and treaties with the South as brought substantially under one military control the states on the left bank of the Main as well as those on the right. The method by which this military union of all Germany was brought about forms perhaps the most profitable study of the whole period.

As early as the 4th of August, 1866, the king of Prussia made a proposition to the German states in alliance looking toward a treaty of union. It was suggested that the treaty be of binding force for one year, in order that within this time the desirability of further union and alliance might be fully considered. The invitation was accepted; and on the 17th of the following December the plenipotentiaries of twenty-two of the German powers came together at Berlin for the conference. The address with which the session was opened was delivered by the president of the Prussian ministry, and was a model of clearness and frankness. The speaker declared that the old German Confederation had failed of both the objects for which it had been formed; it had neither been able to secure to its members the safety which it had promised, nor had it succeeded in freeing industrial development from the chains which the autonomy of so many states had imposed upon the nation at large. If the new constitution would avoid these deficiencies and dangers, it was of the utmost necessity that the allied states should be bound more firmly together. This end could be best accomplished through the establishment of a military and diplomatic system that would be under a single control, and by the formation of a general legislative body that should have the sole power of framing such laws as would be of general interest to the common country. The necessity which was thought to be universally felt of such an organization, the Prussian government had attempted to provide for in the prop-

osition laid before the different states. That this necessity demanded the surrender of something of individual independence for the benefit of the whole was undeniable ; it was indeed abundantly taught by the lessons of the year. The unlimited independence to which, in the history of Germany, single families and single dynastic territories had carried their isolation was the real cause of that political impotency to which a great nation had hitherto been condemned. This had been manifest in the fact that the political authorities of the several states had never been able to establish any general and continued unity of action. Every one of the individual parts of the common country had been exclusively occupied with the consideration of its own local affairs, without regard to its neighbors ; and this mutual exclusiveness had formed an effective hindrance to the consideration of those interests, which could only receive proper legislative treatment by the nation at large.

After showing in this way the weakness of the old confederation, Bismarck proceeded to point out the means by which this political impotency could be brought to an end. They were, in short, a limitation of the power of the individual sovereignties, an abandonment by the single states of a portion of their independence, for the sake of one common German nationality, the subordination of the single parts to one strong central power, and a general congress or diet to be made up of representatives chosen by direct and universal suffrage.

The favor and even the enthusiasm with which the propositions brought forward by Prussia were received may be best inferred by the surprising rapidity with which the negotiations were brought to a close. On the 9th of February, 1867, the new Constitution was signed by the plenipotentiaries ; on the 12th of the same month the election was held amid the greatest enthusiasm throughout Northern Germany ; and on the 24th the king opened the first session of the North German Parliament.

The address delivered by William on that occasion awakened the utmost satisfaction. It may be doubted, indeed, whether up to the time of his coronation as Emperor any single event in his life has created so much enthusiasm in his favor as this

address of the 24th of February. It would be difficult to imagine anything more fitting to the importance of the occasion than his well-chosen words. He began by referring to the satisfaction with which he addressed such an assembly as for centuries had surrounded no German prince, and then, in words calculated to move the pride of every German, proceeded to speak of the resources of the common country, of the weakness that had come upon the nation in consequence of sectional division, and of the common willingness of all to throw aside these jealousies and weaknesses. The address concluded with these words: —

“ As heir of the Prussian crown, I feel strong in the consciousness that the successes of Prussia have been steps to the restoration and elevation of the German power and honor. The adjustment of the national relations of the North German Union with our countrymen south of the Main is left by the conditions of the treaty of the past year to the untrammelled free will of both parties. For the encouragement of the most complete political agreement, our hand, as soon as we have so far completed our organization as to be in condition to enter into treaty relations, will be ever open to welcome the approach of the South German states. The preservation of the Zollverein, the general encouragement of domestic economy, the establishment of full security for the general protection of the German territory, are fundamental demands which must first of all be recognized by both parties. Upon us alone, upon our unity and our love of the fatherland, depends, at this time, that security for the future of collected Germany, in which, free from danger of falling again into discord and impotence, the nation, in its own self-determined methods, may establish its constitutional restoration and its perpetual welfare, and, trusting in the counsels of its people, may fulfil its peace-loving mission. I cherish the fullest confidence that posterity, in looking back upon the common work, will not say that the perils of the earlier unsuccessful efforts have been without their lessons of usefulness to the German people, but rather that our children will recur with thankfulness to this diet as the founder of German unity, freedom, and power. Through our common efforts may the dream of centuries, the longings and the struggles of the latest generations, be carried forward to the most complete fruition. Full of confidence,—in the name of the allied governments, *in the name of Germany*,—I call upon you: help us to bring the great national work to a speedy and sure conclusion.”

The great influence of this magnificent address in helping on the work of consolidation came from the fact that the king spoke as a German and not as a Prussian. When, in spite of all the pride of Prussian victory and consciousness of Prussian strength, he addressed the diet "*Im Namen Deutschlands*," and not only himself forgot, but counselled others to forget, the name of Prussia, he hit upon the magic word for which Germans had been listening ever since the days of Barbarossa.

In view of the recent establishment of the Empire, it is interesting to notice the impression made by the address of King William upon disinterested parties. In England the discussion of the German questions was most full and intelligent. In France alone the situation was not understood. As we shall hereafter have occasion to notice, the French government, even after the treaty with the Southern states had been signed, believed, or pretended to believe, that a South German Union could be formed which would counteract and resist the tendencies in the North.

The *Wunschzettel* of the French government was, that Bavaria, Wurtemberg, Baden, and Hesse should unite in firm opposition to the policy of Prussia; and the Emperor appears to have believed that such a confederation would be no difficult matter to bring about. No doubt, for the predominance of France in Europe, such a confederacy would be in the highest degree desirable. It would give a convenient basis of operation for an alliance with Austria, and in case of need, perhaps, make it possible to bring Prussia and her allies to a second Jena.

But, in all of Napoleon's blunders, there has been scarcely a weaker one than this. From the first, such a confederation would have been unnatural and impossible. Of the four states, the two duchies were already as good as promised to the North. In Baden the Grand Duke and the people alike felt the power of the Prussian magnet, and of the two parts of Hesse the northern was already represented in the North German Parliament. Moreover, it was easy to see that in case of an attempt to form such a confederation, the smaller states would be obliged to put themselves under the guidance of the most powerful, and that one could be no other than Bavaria. If the

states were in any manner to compromise their independence, every consideration urged to the acceptance of that leadership which, in times of danger, would afford the best protection. Union, under the leadership of Bavaria, was therefore out of the question. Either the states must remain quite independent, or they must in some way be linked with the fortunes of the North. Which of these two policies should be adopted depended, of course, for the most part, upon the action of the government of Munich.

After the course which Bavaria had taken in allying herself with Austria in the seven weeks' war, there would seem to have been every reason to anticipate the most active opposition to the policy of Prussia. It is not easy for a nation to go from the camp to the halls of legislation, without carrying with it something of its old hostilities. And yet it could not be concealed that in Bavaria there was a strong party which favored Prussian influence, and, perhaps, even Prussian alliance. Before the end of the year 1866 this party had become so strong as to compel the president of the Bavarian ministry to give way before its vigorous attacks, and the portfolio of Foreign Affairs was given to Prince Hohenlohe. This minister was known to have favored a firm alliance with Prussia, even as early as the Treaty of Prague, and therefore his appointment was one of peculiar significance. The Prussian party made haste to avail itself of the new reinforcement to its strength, and brought forward its views in the form of an address to the king.

It was urged that the policy of Bavaria should be the establishment of one common fatherland, united under a single central power and a single parliament. There should be, it was claimed, such an autonomy of the single parts as to allow them perfect freedom in the conduct of their local affairs. The liberties of the people should be guaranteed by the general government. For the accomplishment of these ends it was desirable that the states of Southern Germany should enter into the North German Union immediately, in order that they might have a voice in the formation of the Constitution.

These propositions, brought forward in the Bavarian parliament by the left, doubtless counted upon the support of the

new minister. But responsibility makes one conservative. It was soon found that Hohenlohe was no longer willing to adopt the extreme measures which he had favored before he had taken his seat at the head of the cabinet. But the debate on the address forced him to show his colors. Accordingly on the 19th of January, 1867, only two days after the address had been moved, he brought forward the programme of the government.

Although, in this declaration of policy, Prince Hohenlohe was far more specific in pointing out what ought to be avoided than in showing what ought to be done, yet there could be no mistaking the course which the government was intending to pursue. The minister declared, in substance, that a union with Austria was impossible ; that the formation of a Southern Confederation would be to place the states of Southern Germany at the complete mercy of their neighbors ; and that the former aim of Bavarian diplomacy, to enter into a close union with the North, was out of the question. In support of this last proposition, it was urged, on the one hand, that the Treaty of Prague would compel Prussia to reject such a proposal, even if advances should be made by the South, and, on the other, that the evident tendency in Northern Germany was to consolidate the individual powers into a single government, in a manner that would be in no way acceptable to the people of Bavaria.

Having thus disposed of the negative side of the question, the prince advanced to a consideration of the positive. In substance, his recommendation was that the Bavarian government, while maintaining absolute independence and sovereignty, enter into an offensive and defensive alliance with Prussia. In case of war with a foreign country, such an alliance would compel Bavaria to declare herself as Prussia's confederate. Under such circumstances the Bavarian army would be under the general direction of Prussia ; and, therefore, if such a policy should be adopted, it would be in the highest degree desirable that not only the armies of Bavaria, but also those of the other Southwestern states should be so reorganized that they could be placed under one general direction. This, then, was the policy of the Bavarian government as openly declared. No entrance into the North German Union, but a military alli-

ance, under the command of Prussia. It was, perhaps, less than the national party had hoped ; it was certainly more than its opponents had expected.

In looking at the history of these international relations and the development of these new policies, there is nothing so astonishing as the blindness or stupidity of the French government in continuing to believe that the states of Southern Germany could yet be easily arrayed in military opposition to those of the North. These recommendations of Hohenlohe were made two full months before the famous discussion in the French Chambers, when Rouher, in justification of the course of his government, pretended to believe that a South German Union would yet be formed in opposition to Prussia. Nor indeed was this all. As if for the very purpose of opening the eyes of the French, the ministers of war of the Southern States came together at Stuttgart early in February, in order to complete the military organization recommended by the Bavarian minister. Thus, the four states south of the Main proceeded to carry out, under the very eyes of Napoleon, the military alliance which Bavaria had proposed, and which, as everybody knew, Prussia desired.* That Napoleon, even as late as the beginning of the recent war, rested his hopes of success so largely upon the support of the South German states, finds its best explanation in that period of diplomatic blindness and blunders which would seem to be a sufficient proof of diplomatic imbecility.

During the period consumed by the negotiations which we have just been considering, the tremendous consequences of the Prussian successes were unfolding themselves before the eyes of the French people. Although there were various con-

* It must be said in justice to French intelligence, that the obstinacy referred to was peculiar to the government alone. If the ministry persisted in ignorance, it was no fault of the opposition journals. "Where now," cried out the *Temps*, "is the confederation of South Germany, the invention of French diplomacy ? Where are the stipulations of the Treaty of Prague ? Vanished ; vanished like the snow of the last week. The line of the Main, as Bismarck's organ for the quieting of Hohenlohe declared, is only a *fiction*. The introduction of the Prussian military system south of the Main is the next purpose of the Berlin cabinet. But let no man in France be deceived. The Prussianizing of the armies of Bavaria, Wurtemberg, Hesse, and Baden is only the first step in the way of Prussianizing the whole of Germany."

jectures as to the future relations of Prussia and the other German states, south as well as north of the Main, yet the fact is undeniable that the French press saw that the result of the war would be to accomplish a complete transformation of the German nationality. In the place of the Germanic Confederation of 1815, immense and unwieldy from the very nature and complexity of its government, France was now to have as a neighbor one single, compact nationality, under the form of a confederation indeed, but still confederate only in name, since in reality all its forces were to be concentrated in the hands of a single nation and a single ruler. There was no denying the fact that the Prussians had displayed all the best characteristics of a great military power. The energy and compactness of their army, the rapidity of their movements, the excellence of their weapons, and, above all, the grandeur of their success, made it certain that the Prussians would no longer treat with France save on terms of a haughty equality. And then, worst of all, the French army was in no condition to take the field, in case the friendly relations which then existed should be interrupted. From whatever point the question was viewed, it appeared hedged about with difficulties, and it was evident that the most careful statesmanship would be required to save the nation from humiliation, if not from dishonor.

But the difficulties for the Emperor himself were far more formidable than for the nation at large. If his government had not been committed to a definite policy, it would perhaps have been no very difficult task to convince the French people that the German question was in a fair way of happy settlement. But such easy argument was made impossible by the previous declarations of the Emperor. The mischievous letter of June 11 had promulgated the imperial policy with all the authority of an oracle, without that oracular indefiniteness which would admit of a double interpretation. It was plain to everybody that the government had intended to say diplomatically that Prussia must not become too strong, nor Austria too weak, since the former was to be the enemy and the latter the ally of France ; and, moreover, that the smaller German states must be kept aloof from both, in order that a Rhenish confederation might be built up into an effectual barrier against the too great aggrandizement of either.

When, therefore, in the face of these declarations, the people saw Austria put quite out of the game, and Prussia getting all the smaller states into her own hand, it was impossible to restrain their discontent. They remembered how Napoleon had entered upon his "Italian mission" for the evident purpose of building up a confederation of Italian states, which would need to recognize the Napoleonic dynasty as its creator and protector, and how the affair had ended by giving to Victor Emmanuel a single kingdom which extended from the Alps to the *Ægates*. And now, with this result in their remembrance, the people were bitter in their declarations that the German policy of the Emperor was in a fair way to turn out even worse at the hands of Bismarck than had the Italian at the hands of Cavour.

With all of these facts and fancies seething in the minds of the French nation, it was no easy task for Napoleon either to explain the past or to satisfy public demands for the future. But silence was no longer possible. M. Druyn de Lhuys was therefore dismissed, and the *ad interim* successor, M. La Valette, published the circular of the 16th of September.

This paper, addressed to all French ambassadors at foreign courts, was composed with unusual skill, and even with something more than the ordinary grace of French diplomacy. It betrayed no impatient mood, and concealed every trace of imperial disappointment. Perhaps it would not be too much to say that there was pervading it something of an air of jubilance. The obligations of the Treaty of 1815, which for forty years had bound eighty millions of people in virtual opposition to France, were at length broken. Each of the great nations was now restored to the plenitude of its independence. To this condition of European affairs France ought to take no exception. Proud of her own unity, she ought not to regret or oppose the work of assimilation which had just been going on in Germany. Rendered more homogeneous by a better adjustment of territorial boundaries, Europe afforded guarantees for the peace of the Continent which, to France, could be neither injurious nor dangerous. In the new order of international relations, France would have forty millions of inhabitants, while Germany would have only thirty-seven millions, of which twenty-nine would belong to the Confederation of the North and

eight to the Confederation of the South. Austria would have thirty-five millions, Italy twenty-six, and Spain eighteen. What was there in this distribution to disquiet the French people? In summing up, La Valette used these words: "From the elevated point of view from which the imperial government considers the destinies of Europe, the horizon appears to it to be free from menacing eventualities. Formidable problems, which required solution, because they were not of a nature to be suppressed, were weighing heavily upon the destinies of peoples. These problems, which might have presented themselves in more difficult times, have received their natural solution without concussions of excessive violence, and without dangerous recourse to revolutionary passions. A peace which rests upon such foundations will be a durable peace. As for France, wherever she directs her attention, she sees nothing which can impede her advancement or trouble her prosperity."

Since Talleyrand turned his own definition of words to the purposes of diplomacy, there has been no more adroit state paper than that of the 16th of September. And yet at a single point it was fatally vulnerable.

The burden of the circular was to show that the changes brought about by the war were for the general advantage of all Europe, inasmuch as by them the peace of Europe was secured, and for the special advantage of France, inasmuch as the obnoxious treaties of 1815 were no longer of binding force. For the ears of every nation the circular contained a paragraph of smooth words, and its general tone was unequivocal concerning the pacific tendencies of the times. And yet almost absolutely concealed in the midst of these diplomatic euphuisms was a single sentence that throws an honest doubt upon the integrity of the whole. After speaking at length of the peaceful disposition of the Empire, he adds: "And yet in the emotions which have prevailed in the country there is a legitimate sentiment which it is necessary to recognize and state with precision. The results of the last war contain a grave lesson, and one which has cost our army nothing of its honor. They teach us the necessity, for the defence of our territory, of perfecting our military organization without delay."

Here, then, was something quite at war with the rest of the

circular. How was it to be interpreted? The journals at once declared that there was no need of incurring all the expense of a reorganization, if the minister's presentation of European politics was a true one. The conviction naturally enough at once became quite general, that the Emperor had some ulterior designs, quite different from those displayed in the letter of La Valette. And the Emperor's enemies, on both sides of the Rhine, were not reluctant to use against him the shafts which had been furnished by his minister. The Prussian cabinet had no occasion to publish their comments on the French policy, but it is not difficult to imagine that their reasoning was something like the following: The French objections, as declared by La Valette to the Treaty of 1815, were that France could have no quarrel with any state or province between the Netherlands and the Tyrol, without incurring the open hostility of eighty millions who were bound together for mutual protection. Inasmuch as those treaty obligations now no longer exist, the Emperor imagines that the danger of a united opposition to any French aggression has passed away. In view of this fact it is easy to see why Napoleon thinks that a military reorganization is needed. His pacific declarations will have no meaning whatever after the moment when his army is ready to cope with ours and he can find a decent pretext for war. Such in the main was the reasoning of the Prussian journals; and if we may judge from the continued activity of the military bureau, we are safe in believing it was substantially the reasoning of the Prussian government. Thus while the French people, as best they might through a muzzled press, growled at the inconsistency of their government, the Prussians accepted the military clause of La Valette's paper as a hint that they must be ready for such "menacing eventualities" as might arise in the future.

The circular letter of La Valette bore the date of the 16th of September. It soon became apparent that the military suggestions of the paper were not without their meaning. The shops working in the interest of M. Chassepot and the government were crowding to their utmost capacity the manufacture of arms, and a high commission of ministers and marshals, with the Emperor at its head, was busy in maturing

plans for the reorganization. The results of the labors of this commission were placed before the people in the columns of the *Moniteur* on the 12th of December.

The commission declared that France ought to be in condition to place in the field an army of 800,000 men, and to organize in addition a force of sufficient strength to insure internal order as well as to defend the frontiers and man the forts in the absence of the regular army. For the attainment of this end, the commission proposed to divide the military forces of the nation into three classes,—an *armée active*, a reserve, and a *garde nationale mobile*, each to consist of 400,000 men. This enormous force was to be kept up by a most sweeping conscription. Every year so many young men as were needed for the first two classes were to be drawn, and their position, whether in active service or in the reserve, was to be determined by lot. Those drawn were to remain six years in service, and then were to be transferred for three years to the *garde nationale mobile*. The army in reserve was to be divided into two parts, one of which was to be brought into service at the call of the Minister of War, and the other by decree of the Emperor.

Thus it will be seen that the recommendations of the commission would not only impose an enormous burden upon all classes of society, but that they would sweep away one of the most important constitutional prerogatives of the Corps Legislatif, namely, the right to fix the military contingent. The plan contemplated the placing of 600,000 men at the permanent disposition of the Minister of War,—a fact that was in most flagrant violation of the Constitution and of the tendencies of public opinion. The discontents, therefore, which had shown themselves after the publication of the September circular, and had kept themselves in check but for want of something definite to oppose, broke out, on the publication of this report, into demonstrations of the utmost violence. The political temperature was so fast rising to the revolutionary point, that the government found it necessary to recede. The official journals made haste to declare that the recommendations of the commission had been only “a preparatory study,” and that they admitted of such modifications as, in the future,

circumstances might seem to dictate. Thus, without abandoning the positions taken, the commission withdrew the report from the public eye, probably hoping that at some future time it might be brought forward with better prospects of success.

From this *dénouement* of the Emperor's first attempt at military reorganization, it is natural to draw these two inferences: first, that any suspicions aroused on the right bank of the Rhine by the circular of La Valette must have been immensely strengthened by the purposes of the imperial government as revealed in the military report; and secondly, that the Emperor was fully convinced that he must either abandon the idea of remodelling the army on the plan proposed by the commission, or he must win the French people into a mood more friendly to its acceptance. That the so-called reforms of the 19th of January were intended simply as a sop to the Cerberus of public opinion may not be affirmed; but, in view of all the circumstances, to suspect that such was the case is neither unreasonable nor unnatural.

With the intrinsic importance of the constitutional changes that were inaugurated by the French government in the early part of the year 1867 we have nothing whatever in this connection to do. It is enough to say that, if they were intended to conciliate public opinion and prepare the way for the desired military reform, they were a complete failure. The discussions which followed the opening of the Chambers make it perfectly plain that the changes proposed were generally regarded as a mere shift of form, without any essential change of substance. Although the right of interpellation, which the Emperor now proposed to grant,—a right which forms so important an element in English usage,—was in itself received with considerable favor, yet the enthusiasm felt was fully counterbalanced by the dissatisfaction manifested at the loss of certain other privileges that were to be withdrawn. The reluctance with which the legislative body abandoned the right to discuss the Emperor's address was quite enough to dampen all zeal for the other features of the reform. Even the satisfaction that was experienced in certain quarters at the modification of the restrictions on the press proved to be momentary only; for both the publishers and the public soon

learned that the tribunal to which the new law made the press accountable was no less exacting than had been the executive power itself. If anything additional were needed to bring to an end all favor toward the new laws for the control of the press, it was furnished to one party by Rochefort and his fellows, and to the other by the manner in which they were dealt with.

Thus the hostile agitations which had been first excited by the German policy of the Emperor in the course of the war, and which had been considerably increased by the circular of La Valette and the report of the military commission, were not very essentially modified by those January reforms from which the government, as was thought, had hoped so much. In spite of the Emperor's efforts, the public discontents remained unchanged.

Under these circumstances the eyes of the nation were turned with unusual interest to the Corps Legislatif. There had been no session since the outbreak of the German war, and it was therefore anticipated that the foreign relations of France would be taken under most searching review. Nor were the people disappointed. When, on the 14th of March, the German policy of the government came up for consideration, it was evident that the discussion was to manifest all the heat that had been generated by the most intense and opposite convictions concerning questions of the most vital importance. What had been the causes, remote or immediate, which had secured the consolidation of Germany? What part had been taken by the imperial government in the preparation for these events, and in their development? In what situation had the new order of affairs left France? In view of the changes that had befallen the neighboring powers, what foreign policy could best secure to France the benefits of a lasting peace and, at the same time, fortify her in the international position of which she must not see herself deprived? These were the momentous questions to be considered, and to their discussion was brought all the energy and eloquence of the most gifted French orators.

Probably no man in France was so thoroughly unfitted by education and habit of thought for a candid observation of the

great events which were occurring as was M. Thiers. As historian of the Consulate and Empire, he had dwelt in an atmosphere of French glory until he had come to look upon France as nothing less than the sun about which the other nations of Europe must revolve in a kind of planetary subordination. It was not in the least unnatural, therefore, when he saw this planetary system, which had contributed so much to the glory of his country, disturbed, that he should desire to enter his protest, and to give a lecture to those through whose instrumentality he believed the disturbance to have been made. Moreover, the intensity of his feelings was probably somewhat increased by the fact that he foresaw the course likely to be taken by the states south of the Main. He beheld the formation of the North German Union, and perceived that all the efforts of the French to counterbalance the weight of that union by the formation of a similar one in the South were likely to fail. His feelings, therefore, sought the first opportunity for expression. Although the friends of the government had no occasion to anticipate any compliments for their master, yet all were so anxious to hear the old parliamentarian on so important a subject, that the regular order was pushed aside and the Tribune was assigned to him for the 14th of March.

The argument of Thiers, which was three hours in length, was an energetic protest against the politics of the nineteenth century and a plea for that of the seventeenth. His leading thought was that in former times France had been surrounded by a large family of small nations which were dependent on her for protection, but that now, thanks to the policy of consolidation, the many small governments were disappearing and a few powerful ones were rising in their stead. On the old policy of sustaining the smaller surrounding states the supremacy of France had rested. But now the situation had rapidly changed. Through the efforts of France, Italy had been united under a single crown, and, what was still worse, by means of the very unity thus secured, a hundred and fifty thousand Austrian troops had been held on the Italian border, and thus the Prussians had been able to triumph at Sadowa. Thus the French government had done its full part toward securing the ascendancy of

Prussia. Nor was this all. Greater evils were yet to come. France must not be deceived. If this fatal policy was not arrested, Prussia would soon have control of the forty millions of Germans, and Russia would trace her boundaries south of Constantinople. In opposition to this tendency, it was the plain duty of France to let her voice be heard. By joining hands with England and the secondary powers, their mutual interests might be protected. In this way alone could peace without dishonor be preserved. At the close of the speech one of his colleagues declared : "It is true, M. Thiers knows how to secure all, but he makes of France the gendarme of Europe."

On the following day the question was discussed by MM. Garnier-Pagès and Ollivier. Neither of these orators agreed with the other, nor indeed with M. Thiers. The former believed that Germany was permanently divided into three antagonistic portions, and that France, therefore, need have no concern for the future. Ollivier, on the other hand, saw that the acquisitions of Bismarck would not only be permanent, but would also be extended. Whether agreeable to France or not, the states in the South would yet, despite the Treaty of Prague, reach out the hand across the Main, and knock for admission to the Union. What, then, ought France to do ? In his opinion, she should recognize the fact as in no way directed against herself. The forced annexations of Prussia were indeed a matter for protest, but not so the formation of the North German Union. It had been the policy of France to allow the governments of Europe to form such alliances as they chose, and such a privilege could not be denied the German states. Only by a friendly recognition of the situation in Germany could Prussia be withdrawn from that alliance with Russia which, if continued, would surely result in the fall of Constantinople.

These pacific declarations of Ollivier called out the military spirit of Count Latour. In his estimation a war with Prussia was "inevitable, and only a question of time." The duty of France, therefore, was to enter into a firm alliance with Austria for the protection of the three great interests that were common to them both, — the protection of Constantinople, the

prevention of the re-establishment of the German Empire, and the defence of the temporal power of the Pope. With such an alliance it would be easy to control the South German states, and to say to Prussia, "Thus far and no farther."

The military zeal thus far more or less conspicuous in the debates, M. Rouher attempted to dampen, while at the same time he made a vigorous effort to defend the imperial policy. He claimed that the whole world had been taken by surprise at the issue of the battle of Sadowa, and that, although the results of the struggle were to be felt for centuries, France had been compelled to decide upon its action without the delay of a single moment. It had been the imperial policy to preserve peace where it existed, and to restore it at the earliest possible moment between the nations then at war. And with what result? The victor had been restrained before the gates of Vienna; the cession of nine hundred thousand Bavarians with their territory to Prussia had been prevented; the terms of the conqueror toward Saxony, Würtemberg, and the other Southern powers had been modified; and the length of the war had been limited to twenty days. This record was enough to show that France had committed no mistake. The present hegemony of Prussia had arisen from no weakness of imperial policy, but simply from Prussian ascendancy in the Zollverein. Nor, indeed, was the issue of events to be regretted. The condition of Germany, since the dissolution of the Confederation, was more favorable to the interests of France than it had been before. Thiers had declared that the old Confederation had been purely defensive; but in answer it could be said that the three hundred thousand men whom Prussia mobilized in 1859 had restrained the Emperor before the quadrilateral and led him to sign the Treaty of Villafranca, rather than further to endanger France for the sake of Italy. The government established by the congress of Vienna had been a standing threat to France; but in the place of a single Confederation, with seventy-five millions bound to avenge every supposed injury, there were now simply three fragments that were independent of each other. The North German Union counted but twenty-nine millions; even with the reinforcement of the Southern states it could scarcely exceed thirty-two millions (?)

while the remaining thirty-three millions were under the control of Austria. In these three divisions of Germany there could be no possible danger for France. Even if, as was claimed, Prussia should desire the Zuiderzee, it would only be necessary for England and France together to say to her that the time of consolidations is past.

The weak point of Rouher's position did not escape the keen eye of Jules Favre. "Either these peaceful representations are merely a necessary pretence," declared he, "or the government is bound to withdraw its proposition for the reorganization of the army." He further added that, in the time of the old German Confederation, France had needed for protection not a tenth of the force now proposed. In his opinion, the only means of preventing German unity were in the hands of the dissatisfied German rulers and the oppressed German people. He would have no hesitation whatever in locking arms with the Elector of Hesse and the Duke of Nassau for the purpose of protecting their common interests.

This bold declaration of Jules Favre brought to his feet one of the intimates of the Emperor, Granier de Cassagnac. As it was believed he would speak the language of the Tuileries as well as his own, his words were listened to with far greater interest than their inherent importance simply would have deserved. He believed, with Ollivier, that the tendency of Germany was toward consolidation; with Thiers, that such consolidation was dangerous to France. But his confidence was in the patriotism of the country. He believed in "*natural boundaries.*" A chain of mountains and a river were to him a far better protection than a border picket with Prussian needle-guns before it. France had a right to insist upon being heard on all questions where her own safety was at stake, and in such junctures she must define her own interest. Finally, he would have peace if it were allowed, but war if it were necessary.

Now this fiery debate, although it showed no harmony of ideas and no unity of policy, could not be without its influence on the German side of the Rhine. After the words of Thiers, Latour, and Cassagnac, there was no escaping the conclusion that the military spirit of France was awake; and in view of

the recent recommendations of the military commission, it was by no means unnatural to surmise that the French government would be disposed to make all haste in preparing the army for every emergency. After such declarations as had been made in the debate by the friends of the Emperor, of course the pacific phrases of La Valette's circular passed for nothing. When it is remembered that at this moment the people of Germany were completely ignorant of the existing contract between the North and the South, it cannot be considered strange that they looked upon the situation with something of alarm. The general anxiety found open expression in the German Parliament. The very next day after the fiery expressions of Cassagnac had found utterance at Paris, a member of Parliament at Berlin called the attention of the government to the widespread fear that it might yet turn out as the French prophesied and desired, namely, that the Southern states would enter with France and Austria into a close alliance against the North. This expression of a general sentiment called for a reply on the part of the government, and Count Bismarck made his response the occasion of revealing the existence of a treaty which had been signed some months before, but which up to that moment had been kept a profound secret. Under the circumstances no other possible declaration could have been received with such enthusiasm as the one made by the chancellor. It appeared that an offensive and defensive alliance had long since been formed between the Union and the states south of the Main. On the following day the full text of the treaties was published in the official gazettes at Berlin and at Munich. Thus only three days after Rouher and his colleagues had declared that their hopes of the future in reference to Germany were formed on an alliance with the *Confédération du Sud*, it was proclaimed to the world, not only that the Southern states had entered into league with the North German Union, but also that they had agreed, in case of war, to transfer all their military forces to the command of the king of Prussia.

The circumstances which had led to the formation of this treaty rendered its publication at this moment peculiarly annoying to the pride of the French. The humiliation was

shared not only by those who saw their theory of the "South German Union" vanish into thin air and made ridiculous, but also by the whole French people; for it soon came to be known that the treaty was simply a victory of Prussian over French diplomacy. A mere glance at the course of events after the great battle is enough to convince one that the French did their full share in the work of converting the Southern states from enemies into allies of Prussia.

In the settlement of affairs after the battle, the disposition of Bismarck toward the Southern states was scarcely less severe than toward those of the North. As the latter were forced to pay for their Austrian partiality with their crowns, the former were required to abandon a portion of their territory. Electoral Hesse and so much of Bavaria as lay north of the Main were demanded; and in order that this tax might not fall with unjust severity upon two governments alone, Würtemberg and Baden were required to pay an indemnity to the others. In this threatening situation the cabinets of all the Southern states, with the exception of Baden, turned to the French, and besought their good offices at the Prussian court. Of course nothing could be more acceptable to the French than such an errand. It would evidently atone for a multitude of diplomatic sins in the eyes of the French people if the French minister could go before Europe and declare that they had restrained the victor when about to seize upon the territory of nine hundred thousand Bavarians and the whole of Northern Hesse. Accordingly, M. Druyn de Lhuys instructed the French envoy at Berlin, M. Benedetti, to use his best efforts in behalf of the states which were threatened. Bismarck heard what the envoy had to offer, but chose to reply to the ministers of the Southern states themselves. It was no difficult task to convince them that they were committing a fatal mistake in turning to France for protection rather than to Prussia. The Prussian minister declared to them that he knew perfectly well the price of French favor for any schemes of annexation which Prussia might propose. He had but to abandon to the Emperor Rhenish Hesse and Rhenish Bavaria with the fortresses of Mayence and Landau in order to secure the support of the French for any policy which Prussia might adopt. In

view of these facts, would it not be safer and perhaps more patriotic to turn to a German rather than a Frankish power for alliance? The argument was completely successful. Perhaps it was the alarming hint which it contained that made the Southern powers, with a single exception, so anxious to hasten the negotiations. Be that as it may, a treaty of offensive and defensive alliance, which pledged all the powers, excepting Hesse, to mutual support and protection, and which placed all the military forces under the command of the king of Prussia, was signed on the 22d of August.

In view of the peculiar relations of the French government to the various parties of the treaty, it certainly cannot be considered strange that there was a general desire to keep the alliance for a time secret. The military system in the Southern states was in great disorder, and, until their armies could be run into the Prussian mould, it would be manifestly unwise to incur the risk of war by proclaiming so brilliant a diplomatic victory on the part of Prussia, and so humiliating a defeat on the part of France. The secret was successfully kept from the 22d of August until the 19th of the following March, when the alliance was announced in the North German Parliament by Bismarck himself. At this time the military reorganization in the South had so far progressed as to remove all prudential considerations; and accordingly when the fears of the Germans themselves began to be aroused, the temptation to prick the French bubble that was causing so much alarm was absolutely irresistible.

The proclamation of this treaty could not but arouse the attention of all Europe. In Germany it was everywhere regarded as bridging the Main, and as bringing the whole country, at least for military purposes, into one compact empire. The English journals universally recognized it as a most humiliating defeat of French diplomacy. The "Daily News" expressed its satisfaction that, at length, the world was taking care of itself without the aid of the French; and the "Advertiser" thought that the French national pride could find its only satisfaction in the overthrow of the Empire. The leading journal of Vienna declared that Austria, in so grave a juncture, must not be turned from her true course by any false

sentimentalism ; that she could only save her position in Europe by means of an alliance with the other German states.

To the Southern states, however, the situation was as yet by no means free from embarrassment. Not only were they to be protected, but Prussia was to be supported. The condition of the army, notwithstanding the efforts of Bismarck and Hohenlohe, was but partially rescued from chaos. The commission which had undertaken to reform the military system, and prevent the possibility of such another fiasco as that at Sadowa, was achieving no very important results. Every ruler and every military commander seemed to consider his honor bound up in the preservation of military individuality. Notwithstanding the proclamation of the alliance even, no very great progress in the way of reorganization took place until Luxembourg was threatened, and, as Professor Müller has happily said, the cry, "Hannibal ante Portas," was heard throughout the land.

The little Grand Duchy of Luxembourg rejoices in a population of two hundred thousand souls and one of the strongest fortresses of Europe. Its history has been scarcely less German than that of Baden and Hesse. As early as 963 the territory was purchased by one Siegfried, who succeeded in raising his family to the first rank, and among whose descendants are to be counted at least four of the German emperors. With the other Northern possessions of Charles the Bold, it came more completely under German influence and control on the marriage of Mary with the Archduke of Austria. Since that day it has been twice overrun by the French, but the treaties of Utrecht and Paris, which followed the conquests, compelled its restoration.

When at Vienna, in 1815, it was deemed necessary to establish a fortress of the first rank for the purpose of protecting the northwestern boundary of Germany, it was but natural, in view of its history and location, to select as the site of the new works the old fortified city of Luxembourg. Of course the work of completing and occupying the fortress should from the first have been assigned to Prussia. But in a moment of jealousy or weakness it was given to the king of Holland. It was not long, however, before it was discovered that the prince who

had merited their contempt by taking his ease for a great part of eighteen years at an English fireside, while his country was overrun by the common enemy, was not the one to have charge of the common interests of the frontier. Accordingly by the protocol of November 3, 1815, the command of the fortress was assigned to the king of Prussia, with the understanding that it was to be garrisoned by troops from Holland and from Prussia, in equal numbers. In the following year, however, a special treaty between Holland and Prussia increased the proportion of Prussian troops to three fourths. This method of occupation was confirmed, not only by the treaty of July 20, 1819, between England, Russia, and Austria on the one side, and Prussia and Holland on the other, but also by the diet of the old German confederation. By this last act of confirmation, Luxembourg was adopted as a "Bundesfestung," and thus placed in the same general relations to the country as Mainz and Rastadt. To ask the Germans, therefore, under ordinary circumstances, to abandon either of these strongholds, would be much like demanding that the French should give up Metz or Strasbourg. In addition, it needs only to be said, that, on the 26th of February, 1857, a convention held for the further consideration of the relations of Luxembourg, conferred upon the king of Prussia the right to occupy the fortress with a garrison exclusively Prussian.

In November of 1866, Prince Henry of Orange, at the opening of the grand-ducal assembly of Luxembourg, declared that, inasmuch as the German Confederation had been dissolved, Prussia could no longer claim the right to occupy the fortress in the name of that Confederation. Though this reasonable declaration provoked no reply on the part of the Prussian government, it gave ample opportunity to learn the state of popular opinion on that question in Germany. It soon became manifest that, concerning the occupation of the fortress, opinion was nearly equally divided. There were those who maintained that the treaties gave to Prussia the right to hold the fortress, irrespective of the Confederation, others took the ground that Prussia could not but admit the position taken by the prince. It appeared uncertain, therefore, how the affair would end in case of a formal demand for evacuation.

While Germany was maturing an opinion on this question of evacuation, one of far greater importance was agitating the courts of Holland and France. In view of the evacuation which was hoped for, by Prussia, negotiations had been commenced looking toward the sale of the grand-duchy by the king of Holland to the Emperor of the French. These negotiations, having in view not only the evacuation, but what was of far greater importance, the complete alienation from Germany of a portion of the old Germanic Confederation, were intended to be kept a profound secret until after the evacuation should take place. The affair miscarried, however, through the timidity or the prudence, whichever it may be called, of the king of Holland. However faultless may be his genealogy, William III. is no successor of William the Silent. At the last moment he seems to have perceived, what any one else would have seen at the outset, that, in case the bargain should be fully closed, and should be unacceptable to Prussia, and war should be declared, the Netherlands would be the battle-ground, and that, whatever might be the fate of Luxembourg, the mouths of the Scheldt and the Rhine would be in the greatest danger of being permanently held by Prussia. Whatever may be thought of his patriotism in trading off a portion of his subjects for the purpose of paying his personal debts, or of his diplomatic skill in not going at once to Prussia, it cannot be denied that he showed a glimmer of sense in taking a second look before it was too late. Whatever else he might be lacking, of that part of valor which Falstaff deemed the better part he was the possessor of superabundance.

The treaty of sale was completed on the 22d of March, and was to be ratified by Holland and France before the 5th of April. Napoleon seems, strangely enough, to have counted with considerable confidence on the consent of Prussia, especially if the evacuation should have previously taken place. If he should be disappointed even, he might take the treaty in his hand as a *fait accompli*, and demand the evacuation. It will be seen that to the success of the movement every consideration urged the utmost secrecy. But the king of Holland, after the negotiations between Paris and the Hague had been in progress during the whole of December, January, and February, and the

greater part of March, let out the secret by calling in the Prussian ambassador, and making a confession of the whole affair. It was of course communicated at once to the Prussian government. As early as the 25th of March the ambassador was instructed to reply that to such a transaction Prussia could never give her consent. This prompt declaration not only put an end to all prospect of ratification on the part of Holland, but also led the government of Luxembourg to deny in the official journal the report that any such sale was likely to take place.

To Napoleon, however, this termination of the affair was the most annoying possible. No sooner did it appear that he was to be a second time checkmated by Bismarck, than the wits found it an easy matter to make him ridiculous. They represented him as scouring over Europe, and America even, in search of political game, and finally as going slyly into a game-shop and attempting to buy a hare, in order that he might not be obliged to return home with an empty pouch. But even in this he was frustrated by the ever-watchful Bismarck. The imperial sportsman was not only prevented from catching anything, but he was also not allowed to purchase anything for his game-bag.

Stung by representations like these, the Emperor fixed upon the policy of making such a demand of Prussia as would either mask his own retreat, or transfer the question from the cabinet to the field. If France could not have Luxembourg, Prussia should not remain in the fortress. As the protest of Prussia had prevented the purchase, the protest of France should prevent the occupation. The French government, therefore, sent a note to Berlin, declaring that the occupation of Luxembourg was a perpetual threat to France, and demanding that the fortress should be evacuated. The response to this warlike demand was in substance, that Luxembourg could no more in fairness be regarded as a threat to France than could Mainz or Landau, or, indeed, than could Metz or Strasburg to Germany; and that as for the evacuation, Prussia did not feel qualified to decide until both the people of Germany and those powers which had conferred the right of occupation had been consulted. In view of this reply, France, of course, could but await the result.

Now, it must be borne in mind, that up to the moment when the demand of France was made, the people of Germany had no knowledge whatever of the fact that Prussia had, in the most positive manner, refused to consent to the sale. The two questions of alienation and evacuation were, therefore, in the public mind intimately connected with each other. On the 1st of April Parliament had put to Bismarck two questions: first, whether Prussia was aware of the treaty of sale; and, secondly, whether the government was ready to defend the union of Luxembourg with the rest of Germany, and especially its own right to the occupation of the fortress? To the first of these questions the minister gave a full and an affirmative answer. To the second he responded that, for diplomatic reasons, he could make no reply. Thus, the information given was just enough to show that the Grand Duchy was threatened, but not enough to show that the danger of surrender was already past. The effect upon the people was what may be easily imagined. The outcry over the possible surrender of a territory so truly German was loud and distinct. The very temperate manner in which the question had been treated by Bismarck led many to believe that the government was really on the point of surrendering all right and title to the territory so much desired by the French. The opponents of Prussia everywhere cried out, "Now we are to see the results of the mysterious conferences at Biarritz. Bismarck is not a whit better than Cavour. Just as the latter at Plombières, while pretending to treat merely of Savoy and Nice, swept all Italy under the Italian crown; so the former, by trading off some of his countrymen on the Rhine, is attempting to bribe the neighboring powers to assist in a similar compression of all Germany under the power of Prussia." Nor was the cry confined to the foes of the government. Those who had watched this growth of Prussian power with most satisfaction and enthusiasm declared that the government could not afford to sacrifice the popularity which it had won for itself at Sadowa. From every quarter came opposition to the movement, and opposition only. All saw in it the first step toward that "natural boundary," which Granier de Cassagnac had so much preferred to a border picket.

It was soon manifest that a strong party in the South, as well as in the North, demanded that an immediate and decisive answer be returned, let the consequences be what they might. What may be called the military element in Prussia took the ground that war, rather than withdrawal, would alone satisfy the German people; and that, in view of the imperfect readiness of the French army and the French arsenals, the sooner war was begun the better. It was well known that in France military preparations were going on with most feverish activity. All the shops in the Empire were employing every possible man in the manufacture of chassepots, and the foundries were working day and night in the interests of the artillery, while, to provide for the cavalry, agents were collecting horses in every corner of the land. Von Moltke, and those about him, urged that in the course of a year the complexion of the affair would be entirely changed. Then the French might demand Mainz and Landau as well as Luxembourg, and, in case of refusal, grasp the sword at a moment when they were fully prepared to wield it. In the light of such colossal preparations as were going on in France, it was urged that the true policy was to pronounce an ultimatum, and, in case of necessity, to strike at once into the heart of the enemy. That such a course would have secured the enthusiastic support of all Germany, South as well as North, is abundantly shown by the decision of Bavaria and Hesse. Of all the Southern states, these two had been most reluctant to join fortunes with Prussia, and yet, when this question began to assume threatening proportions, they made haste to fall into line with the others. The lower house in Bavaria, by a formal address to the minister, expressed the hope that the government would allow no doubt to exist that the state would devote all its energies to the protection of the common fatherland. On the 11th of April, the Grand Duchy of Hesse, in imitation of its neighbor, entered into an alliance with Prussia, and its soldiery was at once attached to the Eleventh Army Corps of the Confederation. In Bavaria and in Hesse, as well as in Baden and in Würtemberg, Prussian officers were everywhere giving directions in regard to the reorganization of the troops on the Prussian basis, and the troops reorganized were everywhere learning the

use of the needle-gun. From all these indications it was evident enough that, if Bismarck was to derive his final answer to France and Holland from the German people, there could be no cession of Luxembourg without a general war, and, indeed, no evacuation of the fortress except on the most satisfactory conditions.

But concerning the other source from which Bismarck's reply was to receive its inspiration, there was somewhat of uncertainty. The powers which had signed the Treaty of 1839 could by no means be counted upon for supporting the tenacity of Germany. Before a formal appeal to the powers could be made, however, the Austrian minister, Von Beust, proposed that the Grand Duchy should be ceded to Belgium, as it had desired to be in 1830; and that, in consideration of so important an addition, Belgium should restore to France the territory of which the latter had been deprived by the second Treaty of Paris. This proposition, supported by France and Austria, which were now believed to be in close alliance, might have been in the highest degree embarrassing to Prussia but for the superb reply of the king of Belgium. When the matter was proposed to him his immediate response was, "I cannot barter away one of my countrymen." Upon this Von Beust came forward with a second proposal, which was that Luxembourg should on the one hand be declared neutral territory, and that on the other it should be abandoned by the Prussian garrison. It was on the basis of this recommendation that Russia proposed a meeting of the powers which had signed the treaty establishing the present relations of the territory concerned. The consent of Prussia, however, could be gained only with the express understanding that it would not give up its right to hold the fortress save on the condition that Europe would guarantee the strictest neutrality of the Grand Duchy. Bismarck claimed that if Prussia gave so strong a proof of her desire for peace and reconciliation as to abandon the fortress which the powers had conferred upon her, it was but right that those powers should grant as effectual security for the border in the future as Prussia had granted in the past. With this understanding the conference assembled in London on the 7th of May. The main question was settled before the plenipo-

tentiaries came together, consequently the details were easily arranged. England alone stood in the way of an immediate adjustment. Inasmuch as the terms which Prussia insisted upon bound all the powers to take up arms against any state which should violate the neutrality of Luxembourg, England hesitated to place herself under an obligation to call her armies into the field at a moment's notice. As the demand, however, would put a curb alike upon all the powers, its reasonableness could not long be resisted, and accordingly on the 11th day of May the treaty received the signatures of all the plenipotentiaries.

As soon as the matter of neutrality and occupation had been settled, a question arose concerning the future relations of the Grand Duchy with the Zollverein. The plenipotentiary from Luxembourg inquired whether the treaty just formed would interfere with the commercial relations which existed between his country and the different states of Germany. It was evident that, much as Tornaco had desired annexation to France, he saw that, as such an annexation was now impossible, there was great injury to the industrial interests of his little state by its exclusion from the great advantages of the Zollverein. All his energies were, therefore, now directed to the preservation of the old commercial relations. His desires and hopes in this regard were, of course, encouraged by Prussia. To the immense annoyance of the French ambassador, who, naturally enough, desired to see the last link which bound Luxembourg to Germany severed, the convention decided that the neutrality extended to military affairs only, and that it could in no way interfere with any commercial alliance which the Grand Duchy might choose to enter into.

Thus the "Luxembourg Question" was settled. The advantage was manifestly, at all points, on the side of Prussia, and yet it had been so adroitly secured as to leave no possible grounds for remonstrance. The sacrifice of so powerful a position gave abundant evidence to the whole of Europe that the desires of the nation were pacific, while, at the same time, the stringency of the conditions on which the troops were to be withdrawn gave equal proof that the proper security of the German border was of far more importance to Prussia than

the preservation of peace. To France, however, the adjustment had no agreeable phase whatever. If the government experienced any satisfaction in seeing the fortress evacuated by the Prussians, the pleasure was more than counterbalanced by the chagrin felt at the fact that, in the very act of retreating, Prussia had gained an advantage by transferring the guardianship of the border from herself to the powers which had signed the treaty.

With the adjustment of the various relations of Luxembourg, the diplomatic questions to which the battle of Sadowa gave rise may be said to have been settled. In every one of them the French government was outwitted. If the question at issue had been of such a nature as to leave to France no alternative but interference, the judgment of the world would have been less severe on the course pursued. But it was generally felt that Napoleon had blundered into needless difficulties, and then had, in every case, been obliged to retire with his colors bedraggled in the dust. The resulting humiliation, shared as it was to a greater or less extent by the whole country, was enough to lead to most active preparations for war; and when those preparations were supposed to be sufficiently complete, to induce the nation to rush into a death-struggle on the slightest pretext, and, as infamously declared by the prime minister, with "a light heart."

C. K. ADAMS.

ART. VI.—CRITICAL NOTICES.

1.—*Der Gebrauch des Conjunctivs und Optativs in Sanskrit und Griechischen.* By B. DELBRÜCK. Halle. 1871.

THE novelty of this book consists in applying to the syntax of the verb in Sanskrit and Greek the more rational method that has obtained in etymology since the discovery and study of Sanskrit. The old treatises on the subject were of two kinds: they either set forth practically the use of the moods in the flourishing period of the language for the purpose of interpretation or composition,—a method of treatment which must always be necessary so long as the literatures of these languages are studied or read; or else, in the desire for a more scientific method, they sought to arrange the uses, under categories furnished by our own logical ideas and derived from the classic usages of the languages, and to gather these various uses under some one metaphysical notion to which the speaker of the language itself must have been a stranger,—a method which must be utterly futile, inasmuch as it is neither practical nor, on the other hand, truly scientific.

But the object of this book is to draw from the various uses of the moods in Sanskrit and Greek, by comparing the syntax of the two languages, the original meanings of the two moods respectively, and to show how all the later meanings and uses were, or might naturally have been, developed from these two meanings respectively. In the author's own words, which unfortunately in the translation cease to be German without becoming English, “The whole variety of existing meanings cannot from the beginning have lain in one form, for on such a supposition language would cease to have any definite meaning; but the question must be asked, What is the original meaning from which the rest have been developed?” “We seek,” he continues, “to answer the question, What idea lies at the root of the variety of meanings which we find to exist?” The author is no less sound in his method than in his conception of the subject. “Whatever may be treated of,” says he, “be it the development of a verbal, nominal, or pronominal notion, or that of an inflection, this principle universally prevails; we should not compare the existing meanings with each other, collect kindred ones into a group with a higher (or more remote) general notion underlying them, and so gradually rise to the most universal and widest, the most general and consequently most colorless (or meaningless) idea, and then enthrone that at the head of the logical system as the source of all special meanings, but we should rather seek the *historical point* of

departure of the development of any idea, that is to say, the meaning or idea out of which the rest have been developed. Not as if they were packed away in it from the outset, but as they are connected with that idea by the laws of the formation of ideas. In fact, we should look for the earliest meaning. This principle of the author is the golden rule of all such investigations, and one which if conscientiously followed must lead to very valuable results in grammar and even in the history of the development of the human intellect. This is the method recommended in Mr. Greenough's little pamphlet on the Latin Subjunctive, published (or rather printed) last year, though that essay was much less thorough than the book before us, and contained some ideas erroneous in the details. These are probably the only two books in which this method is applied to the syntax of the verb. Now, as our author suggests, there are obviously two ways of arriving at this object,—one is through the formal analysis of the modal forms themselves into their elements, and the assigning to those elements of their original meaning; the other is through the investigation of the uses of the moods in the several languages, and the discovering which is the oldest form of expression in which the moods were employed. The second method is the one employed by our author. Properly, however, the two ought to go hand in hand, and no results ought to be considered satisfactory that are not arrived at independently through both. Feeling this, the author has given a notice of the results of the formal analysis of the two moods so far as they have been attained, but rather incidentally or as a confirmation of his view than as a fundamental part of his investigation. In this notice he follows Curtius's view as given in *Die Chronologie der Indogermanischen Sprachforschung*, Leipzig, 1867, which, as the book is very rare in this country, I will briefly recapitulate, and the more so, as it is without doubt, so far as it goes, the only satisfactory account of the origin of the moods. The forms which may be grouped together as the Sanskrit subjunctive (or conjunctive) agree in inserting an *a* between the verbal stem and the personal terminations. This mood is the forerunner of the Greek subjunctive. The *a* thus used seems to be the same element that appears as a characteristic of the modified tenses (or the present stem) of four classes of Sanskrit verbs, the same that is the source of the connecting vowel (so called) in Greek and Latin. Its meaning originally is unknown, but from its function in the present stem it gives a *durative* or *continued* force to the stems to which it is annexed. The subjunctive then is only a present indicative or form for present uncompleted action, which through the conative present becomes in force a future and finally a subjunctive. The optative,

however, is formed by means of a verbal root *i* to go in its various modified forms, and the development is nearly the same. Originally meaning, according to this view, "Going to act," it becomes future in like manner, and finally assumes a modal force, i. e. is used in all the various senses of the optative in Greek and the subjunctive in Latin.

There are some criticisms which may be made upon this account, in regard to particulars which bear upon the use and meaning of the moods in later times.

This view, it will be seen, takes no account of the relative ages of the subjunctive and optative, nor of the secondary terminations of the latter; in fact, it makes the loss of the final vowels of the primary terminations a mere accident and without significance. Now there are many indications that the optative is a much younger formation than the subjunctive. The gradual gain of the former upon the latter in Sanskrit, until the final loss of the subjunctive with the exception of a few doubtful remains, the restricted use of the subjunctive even in Greek growing more so in the development of the literature, the loss of the subjunctive proper or its confusion with the optative in Latin, all point to a later development of the optative, which in time more or less supplanted the elder form. Curtius takes the same view in the treatise above cited, though he does not make it of much importance. So also the same conclusion is pointed at by the character of the forms themselves. The *compounded* verbal forms are all evidently later than those in which only one verbal root appears. In fact, the only way in which a compound verbal form can be conceived as arising and coalescing so as to express a temporal or modal idea is to suppose the second verb already formed and treated as a part of speech, and no longer as simple elements, before it is used as an auxiliary. The connection of two separate pure verbal roots with a pronoun which stands in the relation of subject to them both, is to me inconceivable. One can conceive of the idea contained in the clause "I eat" being expressed by the juxtaposition of a root which is neither verb nor noun as yet, but is only loosely suggestive of the action, with a pronominal root referring more or less definitely to the subject. *Ad-mi* used separately might mean "I eat," and then come to be fused into a part of speech or verb with the same meaning. *Ad-a-mi* also might be used a little later in the same manner to mean "I am eating," that is, have begun the process of eating. This then might fuse into a word meaning, "I am trying to eat," and then, "I shall eat," and so finally become a subjunctive. But one cannot conceive of two pure uncompounded verbal roots used separately along with a pronoun, so that *ad-ya-mi* as separate elements should mean, "I am going

to eat." But that, after *ya* and *mi* have coalesced into a verbal form meaning, "I am going," this form so arising should be appended to *ad* so as then to mean, "I am going to eat," seems natural enough.

Nor does this view take into account the secondary terminations of the optative, and it is in connection with these that the preceding remarks become important. If what has been stated be the true view of the genesis of compounded verbal forms, the question arises what form of *i* or *ya* was thus used to form the optative. And we cannot too carefully keep in mind the principle which, though universally admitted to lie at the foundation of all linguistic science, is often lost sight of. Compounds exist first in their component parts before they are compounded. *J'ai connu* is used as a preterit in French, simply because Cicero could say *habeo cognitum* in its literal meaning, or at least only slightly deviating from it towards, "I have learned." *J'aurais* means "I should have," sometimes merely "perhaps I have," or "I may have," simply because somebody used *avoir* and *avais* in their literal meaning, as "I had to have." So with *shall*, *will*, *may*, etc., in English, and *werden*, etc., in German.

Now what did the first Aryan who blocked out an optative say, and what did he mean by it? Evidently he used a form of *i* or *ya* which we should now call secondary. It cannot be without significance that the optative throughout has secondary terminations, except in the first person singular in Greek, and even there sometimes. It is difficult to believe that the loss of the final vowels so early in the history of the language was accidental, where in all other forms (where the terminations are retained at all) the distinction between primary and secondary endings is perfectly preserved.

Now the terminations of the optative are very similar to the imperfect forms of *i* and *ya*. In fact, Benfey (*Allgemeine Monatschrift*, 1854, p. 749) maintained that the optative was formed by means of these very forms. To this view Curtius (*Chronologie*, p. 242) objects that the augment, the peculiar sign of the past tenses, is entirely foreign to the optative. To the view of Benfey in that form this objection seems insuperable. But in the subjunctive with secondary terminations, which is otherwise precisely similar in form to the imperfect and aorist, the augment never appears. What more probable than that the optative should be a new formation made by compounding the subjunctive having secondary terminations of *i* and *ya*, or the subjunctive of the imperfect so called, with a verbal root, and that it never had the primary terminations at all? The first person might then be an imitation, as is sometimes supposed, or a relic of a time when both forms of the subjunctive were used in this way, only

one of which succeeded in establishing itself. The optative would then be a kind of double subjunctive, or double future, or future subjunctive formed for greater precision after the original past subjunctive had developed into so many varieties as to become less definite in its force. Such double forms are not uncommon in other cases, especially in the formation of nominal themes, in double comparatives and superlatives, and perhaps in the special or modified forms of the tenth class of verbs in Sanskrit.

The question further arises, Did these secondary terminations in the subjunctive have any significance? That the loss of the final vowels in this case was accidental seems exceedingly improbable. For no reason can be given for the loss of them in the past tenses at all, except the weight (or emphasis) of the augment. Now these forms never have any augment, except in a very few doubtful cases, which might easily arise from the similarity of the forms to those of the real imperfect and aorist. Now, though the augment is the original proper sign of past time, yet the secondary terminations are no less characteristic of the past tenses, and, having once arisen, might very easily be seized upon to mark a distinction. That this was sometimes done, the omission of the augment in Homer fully proves. It is very true that this difference of termination was at first only accidental, but it is by no means rare that an immaterial or accidental difference is adopted as the sign of a difference in meaning, as in the umlaut in the Northern languages. If this supposition should prove correct, the subjunctives with secondary terminations would originally have been related to that with the primary, just as the Latin imperfect subjunctive is to the present, the sign of tense appearing in the termination. That this difference should afterwards be obscured is not strange, if we take into account what will presently be said in regard to the meaning and tendency of conditional and similar forms in past time.

Our Aryan then who first made an optative said perhaps *ad yat*, "he would be" or "let him be" going to eat. It is uncertain which, for we do not know how far we must suppose the subjunctive to have been developed before the formation of the optative.

Curtius, in his objection to Benfey's view (*Chronologie*, p. 242, before cited), expresses his inability to see the connection between the past tenses and the developed meanings of the optative. That there is such a connection, however, one can hardly doubt. Notice how the word *ought* in English refers only to present and future time, so that if it is necessary to express past time the perfect infinitive must be made use of. So also with this very word *must*, originally also a preterit, and *would*, *could*, *should*, and *might* have also felt the effect of this ten-

dency, but in a somewhat less degree. So also, "If the sky were to fall we should catch larks." Here *were* has moved forward, so to speak, from past time to present, which is its ordinary signification in English, and then through the influence of the *to* following it has reached on into the future. So the French *aurais*, which is also pret-erit in its origin, takes the place of a modal form in many uses, not only those corresponding to the imperfect subjunctive in Latin, but also to the present. The condition contrary to fact, with its conclusion, are regularly expressed in most, if not all, the languages of our family by forms which are past in origin, and in other connections even in meaning. Take, for instance, the condition contrary to fact in classic Greek. So also the use of the imperfect of verbs of necessity, propriety, etc., in Greek and Latin, even when no definite condition can be supplied, and the time referred to is present (*ἔχρην, ἀξιον ἦν, melius erat, oportebat, debebat, tempus erat dapibus sodales*, in which the only occasion for a past tense is a modal idea) is not less instructive. There are many cases, too, in which the Latin imperfect subjunctive seems to be used almost if not quite in the sense of the present subjunctive referring to future time. The most curious case of this tendency is the use of temporal adverbs in Greek and Latin in relation to a condition contrary to fact in present time. After such conditions the regular expressions for the case as it is are *νῦν* and *nunc*. So also *now* is frequently thus used in English. *Tunc* is also sometimes used to continue the false condition. Compare also *ῳφελον* with the infinitive in Greek. Now it is to be observed that in Homer the optative is used both in protasis and apodosis contrary to fact (though more commonly in apodosis), the new peculiar Greek construction of the indicative being not yet fully developed, though already coming into use. In Sanskrit, too, the optative is regularly used in this construction, though a rare form, the conditional, was afterwards developed. A few cases also of this construction are found where the subjunctive with secondary terminations is used. The same phenomenon occurs also in Latin. In the early language the present in the construction contrary to fact is not very uncommon, especially in the poets who preserved old forms, although they had passed out of use, at least in the literary language, almost entirely. And in Latin as well as in the other languages this faded or perverted form is replaced by a new formation, and curiously enough it is just what we should expect from this general tendency of the family,—an imperfect subjunctive, that is, a form which is otherwise used as a subjunctive in connection with absolutely past time.

From all these considerations it would seem that the optative from the outset had a connection with past time and gradually worked for-

ward just as *ought*, *should*, and *were* have in English, till finally it lost its past sense entirely, except in the *connection of tenses* so called, where the absolute time of the main verb served to keep it in its place.

After setting forth the formal origin of the moods, the author comes to the real subject of his treatise.

And at the outset of his own investigations our author lays down another valuable principle, "that the simple sentence is older than the compound." Obvious as this truth seems, it has been rarely considered in the discussion of the moods. And in this connection he calls attention to the significant fact, that the words which connect clauses either subordinate or even co-ordinate did not originally possess that power, but gradually acquired it by being constantly used in sentences which were unconnected, but placed in juxtaposition.

He then continues to narrow down the field of investigation by excluding first interrogative sentences as less primitive, and then negative sentences as only modified affirmatives. He makes use of a still further eliminating process by excluding the second and third persons and the first person plural, leaving only the first person singular as the lurking-place of the fundamental notion of the two moods respectively. In regard to this narrowing process of his, it may be observed that, though it shows clearly the logical mind of the author and his power of dealing with the subject, and is perhaps sound abstractly, yet it ought to be used with caution, especially when we consider the action and reaction of forms and expressions upon each other by analogy, more particularly when they are closely akin. By narrowing too much the field of investigation, by determining too exactly *a priori* where we are to look for the original meaning of a construction, we might perhaps seek it in a form of speech which exists only from analogy with some other which we exclude from observation. For instance, it is by no means sure that the second or third persons are not more likely to contain the original meaning of the moods. Certainly metaphysically the *non ego* makes itself manifest to the mind long before the consciousness of the *ego*.

The fundamental ideas to which the author comes by his analysis are those of *willing* for the subjunctive, and *wishing* for the optative. These ideas he explains further, making them both branches of *desire*, but distinguishing the *will* as a desire with the purpose of attaining the object, the *wish* as a desire without that purpose. It is perhaps needless to say, as he does, that this desire is always in the mind of the *speaker*, which distinguishes these forms from the desiderative verbs. In coming to this conclusion, the author seems, from a desire of symmetry, to fall away from the strictness of the method he so clearly marked

out and the path he so carefully prepared into the old ways, and just herein it seems is the fault of the book, notwithstanding the great acumen displayed in the analysis. It leaves us with an immense gap between the formal subjunctive and the actual one, between the formal *hanami*, "I am killing" (i. e. trying to kill), and his ideal *hanami*, "I want to" (and am determined to) "kill," between the formal *φέρομι*, "I am going to bear," and his ideal, "I wish that I could or may bear."

That the two are connected by development few will dispute, but where are the intermediate links? A great length of time must have elapsed after the elements were put together, before the subjunctive was used to express a command. And it is a just criticism, it seems to me, to ask, How came the moods to develop in a steady stream, and always in one direction, up to the point of *will* (i. e. command) and *wish*? Why did they only then begin to divide in various directions and weaken again to the almost pure futures they are in later times in many of their uses? It seems much more natural that the development should have left in the languages traces of the different stages through which it has passed. When we find expressions as widely separated as *μή σε κιχείω*, "Let me not catch you," and *οὐδεὶς ἴδωμαι*, "Nor shall I see," one cannot resist the conclusion that the two are separate developments from the conative present in which they originated, rather than that the second is a weakening of the first. In the second or future usage is found one of the links in the chain of development of the first or imperative one.

In pursuing his analysis, our author divides sentences into declaratory sentences (*Aussagesätze*) and interrogatory sentences (*Fragesätze*). The first he subdivides into principal sentences, dependent sentences introduced by a relative, and dependent sentences introduced by conjunctions, a very logical division, and one well adapted to the purposes of his investigation. In each of these divisions he finds two well-marked classes of meanings of each mood, one in which each retains its original force in a considerable degree, and the other in which it is very much weakened, which he names respectively the subjunctive of will (*des Wollens*), the subjunctive of expectation (*der Erwartung*), the optative of wish (*des Wünsches*), and the weakened (*abgeschwächten*) optative.

Under the first class of subjunctives he brings all such examples as: ἀλλ' ἄγ, ἐγὼν αὐτὸς πειρήσομαι ἡδὲ ἴδωμαι, Od. VI. 126. ἀλλ' ιομεν, *passim*. ἀλλ' ὄπλιξώμεθα θᾶσσον, Od. XV. 495. So also negatives or prohibitions,

Πριαμίδη, μὴ δή με ἐλωσ Δαναοῖσιν ἔστης
κεῖσθαι. Il. V. 684.

commands, exhortations, and expressions of encouragement, as well affirmative as negative.

It is in connection with the negative command or prohibition that the most brilliant instance of the author's power of analysis is displayed, where he shows the true nature of object clauses after verbs of fearing. He makes these a kind of direct quotation from the thought or feeling of the subject of the main verb. Thus, "I fear he will come," is analyzed into "I fear, let him not come," i. e. with that feeling or thought. This view, we may remark in addition to his explanations, is supported by the fact that neither in Latin nor Greek is there any connective particle for the affirmative fear, and for the negative one only in Latin *ut* or *uti*, and even this may be regarded as used in the same manner as *utinam* in wishes. This view also explains the *cross-purpose* usage of *ut* and *ne* with verbs of fearing in the latter language. It is noticeable, too, that verbs of fearing are often followed in earlier Latin by another form of quotation, the indirect question, *Vereor quid siet*, in Terence, etc. The same analysis is extended by him to *all purpose* clauses with $\mu\eta$ alone, and would of course apply to all indirect quotations of imperatives in Latin where no connecting particles appear, or no other than *ne*.

In the second class are all the more or less future uses of the subjunctive so common in Homer; e. g.

οὐκ ἔσθ' οὐτος ἀνὴρ οὐδ' ἔσσεται οὐδὲ γένηται.
οὐς κεν. Od. XVI. 438.

So, *καὶ ποτέ τις εἰπησι*, frequently recurring.

So also the cases with *κεν* and *ἀν*.

ἔγω δέ κέ τοι ιδέω χαρίν ἡματα πάντα. Il. XIV. 234.

Relative sentences are with great acuteness divided into *posterior*, that is, those in which the action of the relative clause is subsequent to the action of the principal verb; and *prior*, that is, those in which the action of the principal clause presupposes that of the relative. To the former belong all purpose clauses; e. g. Send a guide, who may lead me,

Καὶ ἄμ' ἡγεμόν' ἔσθλὸν ὅπασσον.
οὐς κέ με κεῖσ' ἀγάγη. Od. XV. 311.

is analyzed to mean, "Send a guide, he *shall* (*soll*) lead me"; making the second clause originally an independent demonstrative clause, which in time became subordinate on account of the idea of purpose which exists in the mind and naturally attaches itself to the form of speech, though not expressed in it at the outset.

The latter class, or prior relative clauses, embraces all such relative sentences as contain an indefinite relative and are used in the sense of a protasis.

οὐδῆταιός ὁς ἀθανάτοισι μάχηται, Il. V. 406. Literally, "Let him fight," etc.

The same division is also made in sentences introduced by relative conjunctions; and naturally too, inasmuch as all the conjunctions are cases of relatives, referring however, not to some definite word in the principal clause, but to the action of it as a whole or something suggested by it, as the author proceeds to show. The first class, posterior, includes all purpose and object clauses with *ἴνα*, *ἵπως*, etc., as well as temporal clauses in which a purpose appears with *ἵτε*, *ἕως*, *εἰς* *ὅ*.

The second class, the prior, embraces comparisons with *ὡς* *ἵτε*, and all temporal and conditional clauses in which the relative is indefinite, either with or without *κανεν*.

οἷς δ' ὁ γέρων μετέλεσιν ἀμα πρόσσω καὶ ὀπίσσω λεύσσεν. Il. III. 109.

The conjunctions of other origin than relative are only *chá* and *chéd* in Sanskrit and *εἰ* in Greek. These Sanskrit particles only loosely connect sentences originally independent, and their analysis requires and receives little consideration. The Greek conditional particle *εἰ* he doubtlessly derives from *σὺν*, thus making it of the same origin as the Latin conditional particle *si*. But he concludes that in force it is originally demonstrative or anaphoristic like the relatives, and therefore he divides the sentences introduced by it in the same manner as the preceding, into posterior and prior. To the former belong all uses where *εἰ*, as does *si* in Latin, introduces apparent indirect questions. *βάλλειν οὐτως, εἰ κεν τι φώς Δαναοῖσι γένηται* (Il. VII. 282), literally "Throw, in this way shall you be a light to the Greeks." To the latter belong all conditional sentences proper.

In the same manner he pursues the optative through its various uses with precisely the same divisions. Now it will be seen that there are two quite distinct classes of meanings, with a considerable variety of shades in each. When we keep in mind the origin of the subjunctive, it certainly seems more natural to suppose that his whole class of subjunctives of expectation, as well as his weakened optatives, and also the whole class of posterior relative sentences, are developments immediately from the original *formal* subjunctive and optative with its future meaning, than to suppose them to have passed through a climax of meaning in *willing* and *wishing*, and afterwards to have become weakened. Even if we take this view, we are still indebted to our author for an intelligible account of the protasis and all the impara-

tive uses of the subjunctive and true optative or *wishing* uses of the optative. These have been developed from forms originally presents used for futures into meanings more or less forcibly imperative. But there are left the apodosis and all the future forms of the moods, together with relative purpose clauses and the isolated clauses of result in Latin in a general group, in which the dominant signification has remained future.

The treatment of interrogative sentences is rather misty. In reference to his example, $\mu\acute{e}v\omega\ \eta\epsilon\ \theta\acute{e}\omega$, the author says: "We translate in German, *soll ich bleiben oder soll ich gehen?* But originally the subjunctive meant *ich will bleiben ich will gehen*. But since Menelaus (the speaker) makes the accomplishment of his proposal dependent upon the will of another, there arises through the reflex action of the second stronger will out of the first will (*wollen*) a *shall* (*sollen*)."
And again a little farther on: "In the *Verdeutlichungs fragen* it is very plainly seen how the questions can pass over into exclamations, and how through the situation a negative sense can come in."

This one does *not* see clearly as a development from a *will* or *wish*, but as a development from the original future idea of the two moods it seems natural enough, especially as we find the future indicative sometimes used in precisely the same manner.

The discussion of the indirect discourse is still less satisfactory, though there are very many wonderfully acute as well as just observations upon the change (*Verschiebung*) of persons and moods, and an excellent comparison of the uses and tendencies of the two languages, Greek and Sanskrit, in this respect.

In connection with the change of moods in indirect discourse, our author treats of the use of the subjunctive and optative as depending upon the tense of the main verb. After noticing the *fact*, he says: "A German might be inclined to ask why the Greek has not in such cases simply employed the subjunctive of an historical tense. The answer is, it has none." Then he suggests, what is of course true, that the aorist moods have no relation to time, and continues: "When, then, the Greek could not introduce a change of tense, it was obliged to get along in some other manner, and has done so in a very subtle way. Instead of the subjunctive, which, as our whole discussion has shown, has always a tendency to reality, it employs the mood of wishing, of supposition, of concession, the optative which is farthest removed from reality. It thus does not express directly the past, but only indicates that the action is not even nearly allied to the truth. Here the old method seems to creep in, which, as we all know, is entirely foreign to the ways of comparative philology. The only two questions a com-

parative philologist can set before himself are, first, From what elements was a form compounded, not necessarily of course primitive, but previously existing in speech? and second, What did the first man mean who put them in juxtaposition? No man ever consciously selected a form because it had a tendency to unreality. An expression arises because it expresses either literally, or within the limits of analogy and metaphor, the idea which the speaker had in his mind. The answer to the inquiring German then would be, that the Greek *did* use, not, to be sure, a subjunctive of an historic tense, but what amounts to the same thing, an historic tense of the subjunctive, i. e. a form that in its origin had a *futurum in praeterito* meaning; that, in fact, the Greek optative always retained a consciousness of its secondary origin, coming down from the time when the first Aryan used the secondary subjunctive of *i* or *ya* along with verbal roots. A consciousness that survived also in expressions like, “*Yad aque syām ahám tvám vā ghā syā ahám, syúsh te satyā ihā cishah*,” If I were you, or you were *I*, your wishes would be fulfilled (R. V. 8, 44, 23); in *πάντοτε χεῖρ' ὁρέγων ὡς ει πτωχὸς πάλαι εἴη* (Od. XVII. 366), As if he had long been a beggar;

καὶ νόκεν ἔνθ' ἀπόλοιτο ἄναξ ἀνδρῶν Ἀγαμέμνων
εἰ μὴ ἄρ' ὁξὺ νόησε (Il. V. 311), —

would have been destroyed, had not, etc.

Si tu hic sis aliter facias (Ter. And.).

The optative in indirect discourse proper is omitted entirely, but a future discussion of it is hinted at. It is difficult to see how it can be accounted for except as an apodosis with a mental protasis. This of course would be entirely consistent with the view of our author, as it would come under the head of the weakened optative; but there would be still another future use to increase the improbability of the supposed steady development of the moods in one direction before alluded to. The use of the future after verbs of striving is not compared with other object clauses, — a use which rather tends to support my view by analogy. Nor is the Latin subjunctive of result hinted at, which ought to be accounted for in any complete view of the moods. It would probably come under the posterior relative sentences, and would be another future use.

On the whole, the book is an exceedingly valuable one, both for the excellence of its method and the very great power brought to bear upon the analysis of constructions, and serves to show what may be done with syntax as well as etymology by comparative grammar.

The examples are numerous, occupying one half the book, and are

well chosen from all the various classes of meanings and admirably arranged. An index of passages cited and another of words treated add greatly to its value. We cannot but regard the book as one of the most valuable, both for comparative grammar and classical philology that has appeared for years.

2.—*Ten Great Religions: An Essay in Comparative Theology*. By JAMES FREEMAN CLARKE. Boston: James R. Osgood & Co. 1871.

FORMERLY it was considered a mark of the utmost fair-mindedness to be willing simply to discuss other religions than our own, and one felt authorized in doing it to use any sort of vituperation of the heathen, that the glory of Christianity might thereby be enhanced. Other religions were held to be the most cunning devices of the Devil for ensnaring sinful man, who weakly succumbed to corrupt priests and black superstition. In the book before us more justice is shown to those who were formerly so reviled. But so long as Christianity is studied solely as a revealed religion, not only is the discussion of Comparative Theology far behind the average position of intelligent thought, but it is very little advanced from the time we have spoken of, which Mr. Clarke treats with such just scorn. Scientific treatment of the subject is of course impossible from such a stand-point. Science knows no revelation other than that which belongs to man; and if it belongs to man, it is simply human, and so loses the essential quality of revelation, as it is commonly understood. Mr. Clarke (p. 505) solves this difficulty by calling all religions revealed in so far as they are true. It is only a short step yet to calling them all human, if these revelations are such as are common to all men. On the same page we find, "the supernatural element is to be found in all religions; for inspiration, in some form, is universal." If it is universal, is it supernatural?

This book, then, claims to be a scientific treatment of Comparative Theology, but from that point of view we cannot but regard it as a failure. It is not a scientific treatment of the subject, but an essentially religious one. It is a continuous appeal to our sympathies and our beliefs, to admire Christianity more than any other religion, which it is to be presumed most of us are ready enough to do. The wonderful eclecticism that distinguished Christianity in the first centuries of its existence enabled it to take possession of the growing civilization which is now flowering. No thoughtful man can help acknowledging the aid it gave to civilization, nor should it be denied

that the ordinary march of profane events has contributed to the present wideness of its sway. Abuse of Christianity, besides being unfounded, would be idle and useless. It is, at any rate, a step in the progress of mankind, although at times it may have been a faltering one. But, on the other hand, a scientific treatment of Comparative Theology should be something deeper than such an appeal, however sincere, or than the quotation and application of scattered texts. Many of these, as used by Mr. Clarke, remind us of the attempts of distracted geologists to prove that the revelations of geology were already made by Moses in the Book of Genesis. Were it not that texts from the Bible had already been so often stretched to what seems an impossible extent, we should be inclined to speak more severely of such loose reasoning as that upon page 136, for instance, where it is attempted to be shown that Christianity includes within itself the pantheism of Brahmanism. However surprising the coincidences of language may be in the passages our author compares, they prove nothing but the long-recognized fact, that Christian authors have at times employed some of the phrases of pantheism. Christianity, however, is not pantheistic, and Brahmanism is. Monotheism does not include pantheism, any more than pantheism includes monotheism. They are two utterly distinct ways of looking at the universe, and we cannot regard this method of representing Christianity as including Brahmanism as anything but sentimental and unscientific.

Another of the favorite positions of our author is that other religions are ethnic, but that Christianity is catholic. This statement demands the supposition that Christianity includes Judaism and Mohammedanism as its temporary and local forms (p. 20). But does not the scientific treatment of Comparative Theology rather demand an investigation of the causes of this catholicism in Christianity and of its absence in other religions? We are far from denying the truth of Mr. Clarke's statement; we only chose this as an example of the general style of the work, and we simply wish to speak of the way in which it is treated in what purports to be a scientific work. The error proceeds from the fact that the book is a tractate as well as text-book. At one moment it strives to be cool, impartial, scientific, and at the next moment we are bidden, not, indeed, to detest the heathen, but to rejoice with the Christian. Now there is a time for religious enthusiasm, and there is a time for study. Comparative Theology is a new science, but yet a science, and one that should be studied with as much coolness and unity of purpose as linguistics or anatomy, and we want here to raise our protest against any other way of regarding it. If the work is done badly now, it will all have to be done over again in the future. Let us spare trouble for our children.

So much about the manner of the book. In regard to the matter, it is an interesting compendium of the work of Continental scholars. The sketches of the various religions will be found to bring together a great deal of rare information that will be new to the general reader. They are not all of equal value. Those on Judaism, the Roman, and the Northern religions seem to us to be the best; those on Brahmanism and Buddhism scarcely so good. Brahmanism is so intricate that it would be difficult to make any account of it that would be generally interesting or intelligible, but even Buddhism seems to us to be represented with a meagreness that it does not deserve. More especially do we object to this treatment of Nirvana (p. 163): "The Buddhist asserts Nirvana as the object of all his hope, yet, if you ask him what it is, may reply, 'Nothing.' But this cannot mean that the highest good of man is annihilation. No pessimism could be more extreme than such a doctrine. Such a belief is not in accordance with human nature. . . . The Buddhist, when he says that Nirvana is *nothing*, means simply that it is *no thing*; that it is nothing to our present conceptions; that it is the opposite of all we know, the contradiction of what we call life now, a state so sublime, so wholly different from anything we know or can know now, that it is the same thing as nothing to us." This seems to us to be a specimen of bold interpretation, with no other argument in its defence than that Nirvana as interpreted by all the great scholars and by the Buddhists themselves is against human nature. Yet on page 342 we find Cæsar quoted as expressing his disbelief in immortality, and on page 417 a statement of the probability of similar doubts among the Jews.

The Buddhists rather regard Nirvana as a freedom from all desires. In their religion life is a burden; desire is the main cause of evil, as well as the condition of life. Hence to be free from it is the same as annihilation, rather than the realm of bliss that Mr. Clarke describes so vaguely. The Buddhist is shocked at our idea of heaven; he says: "At the moment the good man has learned to crucify every passion, you send him to heaven, and then the reward for his toils and sufferings throughout his life is the very bliss he has just learned to despise." To him our conception of a future life is gross and coarse, if indeed he does not find it as difficult to ascertain what our idea of that life is, as we do to find out the truth about Nirvana. The interpretation of nothing as *no thing* seems to us to be especially inept.

In reading the book our eyes have been caught by a few printer's errors, although in general it is carefully printed. The symbolic circles on the cover, however, we cannot regard as an ornament.

3.—*Lectures on the Science of Language.* By F. MAX MÜLLER, M. A. Sixth Edition. In two volumes. London: Longmans, Green, & Co. 1871. Sq. 12mo. pp. xx, 481, and viii, 668.

PROFESSOR MÜLLER'S well-known Lectures on Language have gone through a long series of editions in the country of their original publication, and he has now, with good judgment and to the manifest advantage of the public, put them forth in a less stately and a cheaper form, in what might fairly be called a "people's edition." They have been at the same time subjected to something of a revision, and, as compared with their first form (we have not examined the intermediate texts), present numerous differences of reading, of greater or less consequence; although, so far as we have observed, hardly any that touch the essence of their doctrine, or change their character in a material way. By the help of Scribner's authorized reprint (New York, 1863—1865), the work is now so familiarly known to our public, both in its strength and in its weakness, that we should not have cared to return to the subject of it here, if the author in his last Preface (Vol. I. p. xi, note) had not seen fit to refer to and quote, with decided condemnation, our former criticism on his second series of lectures (see this Review, Vol. C. pp. 565—581; number for April, 1865), accusing us of unfairness or even stolidity. We cannot well help, therefore, accepting his implied challenge, and venturing a few words in our own defence. We should be very glad, too, if we can find occasion for it, to confess that we have misunderstood him and done him injustice, and to apologize for our unintended error.

Professor Müller speaks of our review as a specimen of "over-confident and unsuspecting criticism." Precisely what he may intend by the epithet "unsuspecting" is not clear to us. If collateral evidence did not indicate that he hardly meant it as complimentary, we should imagine that it showed his appreciation of our desire not to suspect evil in the author we had under treatment, but to give him the benefit of the most favorable interpretation that the case admitted. This was, in fact, our disposition toward him, and any over-confidence which we may have displayed was doubtless in the main a result of our simple-minded consciousness of rectitude. But the question of *over-confidence* is one to be settled by results: if Professor Müller can refute the objections we brought against certain parts of his work, and can prove that we were flagrantly wrong in bringing them, then whatever confidence we may have shown, be it more or less, was in excess, and we ought now to feel correspondingly humbled. He has undertaken such refutation in one particular instance, but, somehow or other, we do not feel humbled. We will try to state the case fairly, and leave it to be judged by our readers.

One of the principal points for which we blamed Professor Müller, in the review referred to, was, that he cast his powerful influence in favor of reviving the obsolescent names of *hard* and *soft*, as applied to the two great classes of consonants represented by *s, f, p*, on the one side, and *z, v, b*, on the other, instead of adopting for them *surd* and *sonant*, or other equivalent appellations, founded on the actual difference of the classes. The matter was one of real importance in phonetic theory and nomenclature; thus, for example, we had to show last year (Vol. CXI. p. 206; number for July, 1870) that Mr. Peile had been misled respecting it, confessedly by Müller's authority, into perhaps the most serious error of his excellent work on Greek and Latin Etymology; and we notice later that Dr. Helfenstein, in his Comparative Grammar of the Teutonic Languages (an industrious and meritorious compilation), has the same false terminology, with the same want of appreciation of the true nature of the difference underlying it; and we cannot hold Müller guiltless of influencing the usage in this respect of an author by whom he is quoted as a prime and trusted authority. Müller had, in short, the opportunity of striking, in his lecture on phonetics, a stroke against *hard* and *soft* that would have wellnigh or quite finished them, so far as concerned their English use; and our regret that he chose to take the contrary course was great, and distinctly expressed.

Professor Müller replies to our criticism, not by defending the doctrine we ascribed to him, but by denying that he ever held it, and accusing us of misrepresentation. We quote his answer entire:—

"I do not blame a writer in the 'North American Review' for not knowing that I myself have run full tilt against the terminology of 'hard' and 'soft' consonants as unscientific (*unwissenschaftlich*), and that I was one of the first to publish and translate in 1856 the more scientific classification into 'surd' and 'sonant' consonants as contained in the *Rigvedaprâtiśâkhya*. But the Reviewer might surely have read the *Lecture* which he reviewed, where on page 130 (now page 144) I said: 'The distinction which, with regard to the first breathing or *spiritus*, is commonly called *asper* and *lenis*, is the same which, in other letters, is known by the names of *hard* and *soft*, *surd* and *sonant*, *tenuis* and *media*.'"

There are three points in this reply. In the first place, Müller claims that he has run a tilt, somewhere, full against *hard* and *soft* (for this is beyond question what he meant to say; "full tilt" is only an adverbial expression, indicating the violence with which we come in mid career upon some unforeseen obstacle); he does not inform us upon what field; we should rejoice to read the record of the encounter, if we only knew where to look for it. But the question was not what he might have done in some unknown lists, and at some moment of peculiarly

knighthly feeling; it was what he had done in this volume, in which he had undertaken to give the whole English-reading public a systematic view and definition of phonetic relations. So far as here appeared, his "tilt" had been one of those chivalrous encounters in which a knight cherishes the utmost respect and affection for his antagonist, and, the affair once over, lives with him in more loving concord than ever. Again, as regards the second point, we were perhaps not quite so uninformed as Professor Müller chooses to assume of what he had done in his *Rik Prātiçākhyā*, nor unappreciative of the necessity which drove him to the adoption in that work of terms which a large class of students of language, with Bopp at their head, had long been in the habit of using. The terms employed by the *Prātiçākhyā* itself meant literally 'toneless' and 'having tone,' and to translate them by *hard* and *soft* would have been an inexcusable distortion. But we say again, it was his Lectures that we were criticising, not his *Prātiçākhyā*; and if we had referred to his usage in the latter, it would have been only in order to give more point to our condemnation of his usage in the former.

The third item of the defence quite staggers us. We are charged with culpably failing to understand and to report aright our author's views, because he is able to bring forward a passage where, in giving the various terms that have been employed to designate the two classes, he does not omit *surd* and *sonant* from among them. What can he think of the intelligence or the freedom from prejudice of the audience whom he expects to convince by such a plea as that? We will undertake to bring up half a dozen other passages in which the words *surd* and *sonant* are mentioned as alternative designations, — nay, even one or two in which, out of consideration for those who are more accustomed to them, they are directly used, alone, by Professor Müller; yet without detriment to the truth of our charge that he adopts and recommends *hard* and *soft*. Take as example his final summing up of the results of his inquiries at the end of the lecture, where he says, in the old editions, "These I call *hard* letters (*psila, tenues, surd, sharp*; *vivāraçvāsâghoshâh*)," and "These I call *soft* letters (*mesa, mediæ, sonant, blunt*; *sanvâranâdaghoshâh*)."¹ Here, too, we have *surd* and *sonant*, but we are no more taught by our author to use them than to use the long Sanskrit terms, of his own making (for they are to be found in no Sanskrit grammarian), which he superfluously and somewhat pedantically appends to each list of synonyms. And that he himself understands it to be so, is shown by the change he has made later in the text, which now reads, "These I call *surd* letters," etc., and "These I call *sonant* letters," etc., the words *hard* and *soft* having shifted place to within the parenthesis!

If we are not greatly mistaken, the state of the case is this: Professor Müller, like some other students of philology, finds himself unable longer to resist the force of the arguments against *hard* and *soft*, and is convinced that *surd* and *sonant* are the proper terms to use; but, instead of frankly abandoning the one and accepting the other in their place, he would fain make his readers believe that he has always held and taught as he now wishes he had done. It is a case either of ingenuousness or of remarkable self-deception: there appears to be no third alternative.

Moreover, the conversion is, after all, only a half-way affair. Its effects appear at one and another point; but there has been no thorough reworking of those parts of the lecture which involve the question, with reduction of them to a consistent and satisfactory form. On the contrary, Müller's ideas as to the difference of *surd* and *sonant* letters are still crude, confused, and fantastic. The fundamental distinction of intonated and unintonated breath as material of the two classes respectively, he does not quite accept. Repeatedly, he will not allow that the "sonant" letters *are* intonated, but only that they *may be* intonated. He frames an unintelligible theory of *spiritus asper* and *spiritus lenis*, of which the former is our *h*, the latter a something that inheres in soft or sonant letters, and which "we distinctly hear, like a slight bubble, if we listen to the pronunciation of any initial vowel." The contradiction to which we called attention in our former review, as to the possibility of introducing an element of intonation into a mute to make it sonant, is still left unreconciled. Helmholtz, namely, is on one page (II. 144) quoted with full approval, as saying, "Mediæ are therefore accompanied by the tone of the voice, and this may even [for "may even," read "must"], when they begin a syllable, set in a moment before, and when they end a syllable, continue a moment after the opening of the mouth, because some air may be driven into the closed cavity of the mouth and support the sound of the vocal chords in the larynx." While later (II. 158), not having understood, apparently, the meaning of this quotation, Müller says on his own behalf: "Some persons have been so entirely deceived by the term *sonant*, that they imagined all the so-called *sonant* letters to be actually pronounced with *tonic vibrations* of the *chordæ vocales*. This is physically impossible; for if we really tried to intone *p* or *b*, we should either destroy the *p* or *b*, or be suffocated in our attempt at producing voice."

But we are spending too much time upon this subject. We could use up our whole space, if there were call to do so, in pointing out the weaknesses and errors of this lecture on phonetics. It is from beginning to end unsatisfactory. The author has consulted excellent author-

ties, and worked them up with a commendable degree of industry, but he is wanting in inner light, in penetration and sound criticism. He comes at the subject from the outside, and has never gained that thorough comprehension of the movements that go on in his own mouth, without which real insight is impossible. As an example, take the following remarkable statement, inserted in the last edition (II. 133) : "If I could trust my own ear, I should say that this vowel [the "neutral vowel," as found in *but*, *son*, *blood*, *double*] was always pronounced with non-sonant or whispered breath ; that it is in fact a breathed, not a voiced, vowel" ! Some considerate friend should have saved him from such an exposure of his weakness as an independent observer in phonetics.

Lest it be thought that we judge Professor Müller too hardly with reference to his conversion to the doctrine of *surd* and *sonant* letters, we will refer briefly to another somewhat similar case. The so-called "ding-dong theory" of the origin of language, — the theory, namely, which regards each original root as a phonetic type, rung out from the organism of primitive man, when this or that idea struck him, — which has had a limited degree of currency during the past ten years, solely on Müller's authority, is now peremptorily repudiated by its putative father. The latter feels called upon, in his present Preface, to "protest once more against the supposition that the theory on the origin of language, which I explained at the end of my first course, and which I distinctly described as that of Professor Heyse, of Berlin, was ever held by myself." We are compelled to say again : here is either disingenuousness or remarkable self-deception ; or, perhaps we ought to add, one of the most extraordinary cases on record, on the part of such a master of style and statement as Müller, of failure to make one's self understood. We defy any person to read the exposition of the theory as given in the first editions, and gain a shadow of an impression that it is not put forward by him as his own. It comes in after this fashion. The author has examined, in an earlier part of his lecture, other current theories, and has rejected them, almost with derision. He then enters at some length into the discussion of certain general questions underlying this special inquiry. Finally, regretting that he has "but a few minutes left" for its solution, he propounds "the last question of all in our science, namely : How can sound express thought ? How did roots become the signs of general ideas ?" And he proceeds to say, "I shall try to answer as briefly as possible. They . . . are not interjections, nor are they imitations. They are *phonetic types*. . . . There is a law which runs through nearly the whole of nature, that everything which is struck rings" ; and so on, through the well-known ding-dong exposition. In a marginal note, a little later, he gives credit to

Heyse for having propounded the view some years before, but goes on to add further remarks about it, which, equally with the text, appear to show that he himself either arrived at it independently or has made it fully his own. He has to alter and add to his former expressions very considerably in this edition, in order to give the matter a different aspect; and, after all, it reads but lamely, for here is just where, in the context, an explanation of his own views should come in; and the want of it, and the incongruousness of introducing one more view which he does not hold and cannot recommend to his readers, are distinctly and seriously felt. We do not envy the feelings of those who have been, these few years past, defending this theory as Müller's, and denouncing all who would not accept it from him, when they learn that he himself never had the least faith in it. Sure, never were blindly devoted sectaries more cruelly left in the lurch!

The only other point in our criticism which the author ventures to controvert is our objection to his definition of *wh* as a surd or whispered *w*, instead of a *w* with *h* prefixed. To this he retorts: "Now on a question concerning the correct pronunciation of English, it might seem impertinence in me were I not at once to bow to the authority of the 'North American Review.' Still, the writer might have suspected that on such a point a foreigner would not write at random, and if he had consulted the highest authorities on phonetics in England, and, I believe, in America too, he would have found that they agree with my own description of the two sounds of *w* and *wh*." Then, at the point in the lecture where the matter comes up (II. 148), he quotes against us, in a marginal note, Ellis and Bell. This is a perfectly fair reply; and if we had laid any particular stress upon the point, or taken a dogmatic and "over-confident" tone with regard to it, we should have to feel thoroughly confuted. But such is not the case; the objection is simply one item out of several contained within the limits of a single sentence; and we added a "we think" to it, for the very purpose of giving it more the aspect of an expression of individual opinion. The true phonetic value of the *wh*, as is well known to all who have studied English phonology, is greatly controverted; we happen to have a strong conviction on one side, which we take every convenient opportunity of expressing, without intending disrespect to those who differ from us. No single authority is of more weight than Ellis on any subject in this department; but we feel less scruple about disagreeing with him as to this particular point, inasmuch as he (and Bell as well) has what we cannot but regard as a special weakness in respect to labial modifications of vowels and consonants. With one who can hold the initial consonant sound of *dwell*,

for example, to be not a *w* with *d* prefixed, but a labially modified *d*, we should not expect to agree in an analysis of the *wh* sound.

This is all that Professor Müller brings up against us ; and we humbly submit that it is insufficient evidence on which to ground a charge against us either of too little suspicion or of too great confidence. We earnestly desire, and heartily invite, a continuation of his exposures. We should be glad, for example, to see him defend his explanation of the phenomena stated in " Grimm's Law," — an explanation which, so far as we have observed, has found favor with no other philologist, although several have taken the very unnecessary trouble to examine and reject it. We should like, again, to have him try to prove that any one of the three impossible assumptions which we pointed out as involved in his argument respecting the " names for fir, oak, and beech " does not vitiate that argument. We confess, our unsuspecting nature had led us to suppose that his expression of perfect readiness to see his own reasoning refuted was not a mere rhetorical flourish. Once more, we wish that he would establish on a firm foundation his other great argument proving that ideas cannot exist without words ; we were, we must say, not a little astonished to see it repeated without a word of change in this edition. As it is thus renewedly put forward by its author, and as our protest against it is condemned by being unheeded, we are inclined to submit it here to a more detailed and careful examination.

Professor Müller (II. 78) states his aim and design thus : " It may be possible, however, by another kind of argument, less metaphysical perhaps, but more convincing, to show clearly that reason cannot become real without speech " ; in other terms, as the context, both before and after, plainly shows, that there can be no conceptions, thoughts, reasonings, save in and by articulate expression. A doctrine, truly, of the most fundamental importance in both linguistic and mental philosophy, and one of which the demonstration, made convincingly and without metaphysical subtleties, so clearly that even a plain man can see it, will be in the highest degree welcome. Now begins the demonstration : " Let us take any word, for instance, *experiment*." It is taken ; and then the author, as is very much his wont, runs off into a needless and impertinent exposition of its etymology. " It is derived from *experior*. *Perior*, like Greek *perân*, would mean to go through. *Peritus* is a man who has gone through many things ; *periculum*, something to go through, a danger. *Experior* is to go through and come out (the Sanskrit, *vyutpad*) ; hence *experience* and *experiment*. The Gothic *faran*, the English *to fare*, are the same words as *perân* ; hence the German *Erfahrung*, experience, and *Gefahr*, periculum ; *Wohlfahrt*, welfare, the Greek *euporía*." Very interesting, doubtless ; but what

has it to do with the argument? It seems almost as if the author were afraid of the latter, and wanted to break the concentration of our attention upon it by a little harmless by-play. "As long, then, as the word *experiment* expresses this more or less general idea, it has a real existence." Why "then"? Was there, after all, an argument covered up in the etymological exposition, and is this a logical inference from it? Would not the word have a real existence if it should come to express some other idea, and one that was neither more general nor less general? And what constitutes the "real existence" of a word? This last question, however, will find its answer further on. "But take the mere sound, and change only the accent, and we get *expériment*, and this is nothing. Change one vowel or one consonant, *exporiment* or *esperiment*, and we have mere noises, what Heraclitus would call a mere *psóphos*, but no words." That is to say, a particle of mispronunciation takes the life out of a word, reducing it to a nonentity. But, after all, this nonentity is a relative matter, and a word may be both existent and non-existent at the same time. For Professor Müller continues: "*Chárcuter*, with the accent on the first syllable, has a meaning in English, but none in German or French; *charácter*, with the accent on the second syllable, has a meaning in German, but none in English or French; *charactère*, with the accent on the last, has a meaning in French, but none in English or German." It appears, then, that having an existence and having a meaning are equivalent and convertible phrases. "It matters not whether the sound is articulate or not; articulate sound without meaning is even more unreal than inarticulate sound." What is the sense of this? Is it the language of calm and intelligent reasoning, or mere rhetorical talk? Surely, one sound, or one kind of sound, is just as real as another, when it is produced; its being articulate is no bar to its reality. Possibly the glimmer of significance in the statement, which has seduced our author into making it, is that we feel a greater sense of disappointment when we hear articulate sounds to which we can attach no meaning, than when we hear inarticulate sounds, from which we expect no intelligible meaning. But what is the actual intent of the expression that a word "exists" in one language, and not in others? Plainly this, that it is intelligible to one who has learned that language, but not to others. If I have learned English, German, and French, all the three forms of *character* are equally "existent" to me, each in its proper place and connection. I articulate a sentence of Latin or Greek in the ears of one man, and it is to him "even more unreal than inarticulate sound." In the ears of another, it is as "real" as *experiment* and *character* when uttered in the most unexceptionably orthodox manner; and that, too, although

every word in it may involve mispronunciations vastly worse than *experiment* or *experiment*, mispronunciations which would render it unintelligible, and therefore non-existent, to the Romans or Greeks of the olden time. The seat of the non-existence of a word, then, may queerly enough lie, not in the word itself, but in the degree and kind of the instruction of its hearer.

In short, in all Professor Müller's reasonings, here as well as elsewhere in his works, there is an utter and radical failure to understand what a word really is. A word is a combination of sounds which, by a series of historical reasons (whether beginning ultimately in a natural reason or not we need not here discuss), has come to be accepted and understood in a certain community as the sign of a certain idea. As long as they so accept and understand it, it has existence; when every one ceases to use and understand it, it ceases to exist; and nothing else can kill it. No change of form in a word takes the life out of it, provided it be used by one party and understood by another as the sign of an idea. I may pronounce *experiment* as correctly as possible, and yet kill it by addressing it to a Hottentot or Chinaman, or by using it to signify a troop of horse or the British Constitution. On the other hand, I may mutilate it as I please or can,—as young children or uninstructed persons often do,—yet without damage to its existence, if I keep within the bounds of intelligibility. Most people in New England, we believe, say *vágary* instead of *vagáry*, yet the word lives. Many people through the whole English-speaking community say *állý* instead of *allý*, yet the word lives. An excellent friend of ours always speaks of an idiot as an *imbé'cile*, yet we never observed a blank in his sentences where the word came in. No one who, like Professor Müller, ignores and denies this dependence of our expression upon a mutual understanding between speaker and hearer—in other words, its conventional character—can claim that he understands what language is, or can avoid being drawn respecting it into unfounded reasonings and empty speculations.

So much for our author's facts; now for his conclusions from them. The problem is to convince us how, a word being the accepted sign of an idea, there can be no idea without a word; and the solution is this: "If, then, these articulate sounds, or what we may call the body of language, exist nowhere, have no independent reality, what follows? I think it follows that this so-called body of language could never have been taken up anywhere by itself, and added to our conceptions from without." That is to say (since it has appeared above that existence and significance are the same thing, so far as words are concerned), because there are no significant words except such as have significance, there never can have been a time when they arrived at their sig-

nificance. Because such combinations of sounds as *experiment* and *character* do not lie around, or fly about, of themselves, waiting for an idea to which they can be fitted, they can never have been devised and applied to ideas. Because *photograph* was non-existent until the art of making the sunlight draw pictures was invented, it cannot have been gotten hold of to designate the conception of something drawn by the sunlight. But there is a further consequence: "From which it would follow again that our conceptions, which are now always clothed in the garment of language, could never have existed in a naked state. This would be perfectly correct reasoning, if applied to anything else; nor do I see that it can be objected to as bearing on thought and language." Here is more figurative phraseology, of garments and nakedness, with which our author hides from his own eyes the emptiness of his thought. It would equally follow that, as our conception of a photograph is now always signified by that name, the thing could never have been conceived without the name. We maintain instead, that, as such reasoning is incorrect when applied to anything else, it cannot be valid as bearing on language. There are many human beings, also, whom we never see otherwise than clad, but we do not infer that they never can have existed in a naked state. It is and has always been men's custom to give names to things or conceptions when they are found, or made, or won by abstraction, not to make names for things not yet known. And by this means every new-found idea gets its designation, and the increase of knowledge and the growth of language go on together. If Müller's reasonings were correct, there could be no further increase of either. There are in the English language, for example, just so many existent words and no more; and each word is appropriated to expressing some "more or less general idea," or some more or less limited number of such: no more ideas can come into being, because they are unable to exist in a naked state, and all the clothes are sold and in wearing; and there is no provision for more clothes, since the material of such is even more non-existent than inarticulate noises,—and that is the end of the matter, unfortunately. But, to our author's apprehension, there is yet another logical fallacy in his reasoning, which might have escaped our notice, if he had not himself been kind enough to point it out by an added illustration. "If we never find skins except as the teguments of animals, we may safely conclude that animals cannot exist without skins"! We have heard an eminent teacher of logic say that he was accustomed to quote this to his class as a striking example of a false syllogism. Of course, what is true of skins is true of other parts of the animal economy,—say horns or tails. "If we never find tails except as the appendages of animals, we may safely conclude that

animals cannot exist without tails." Besides, accepting both the premises and conclusion, we should have to allow that apples and potatoes, for example, are animals ; and that jelly-fishes and oysters, among others, are not. We prefer to reject both, in the illustration as in the main argument.

The upshot of this whole discussion is only to convince us that there can be real speech without reason, and thus to help show that, after all, the tie between them may not be absolute and necessary. That the argument is not metaphysical, however, we are a little loath to admit : it certainly is not logical ; nor is it commonsensical ; and it as certainly satisfies at least one of the current definitions of metaphysics ; "when you hear a man talking, and no one of his hearers can make out what he is saying, and he does n't know himself, — that is metaphysics."

Let no one accuse us of dwelling at unnecessary length upon the examination and refutation of this singular paragraph. There are, as Professor Müller himself says, somewhere in one of his criticisms, mistakes and mistakes ; some that are oversights, results of haste and heedlessness, or of trust in unsound authorities, and that should be passed over lightly ; others that come from the very depths of an author's character, and are inexcusable. And we hold that this one is of the latter class. It involves erroneous views which lie at the very basis of linguistic philosophy and make the whole structure unsound ; and it exposes a want of logical power, of seeing what is proved by what, that is in greater or less degree apparent in all Müller's work. No one can set out with such a flourish of trumpets to prove so important a doctrine, and then make of the proof so lamentable (not to say ridiculous) a failure, — no one can write that paragraph, and deliver it, and print it, with correction and revise, and review and pass it in edition after edition down to the sixth, after having his attention called to it as unsound, — no one, we say, can do all this, and yet have the right to be regarded as a trustworthy authority in matters of language ; and such, we do not hesitate to say, is Müller's position. Genial he is, an attractive expositor, a delightful discourser and illustrator, gifted with the power to discern much truth by a kind of instinct, and with the poetical faculty of seeing and setting it in the most interesting light ; but profound he is not. The further down below the surface of things, the less is he to be trusted ; we have tried him on no subject where we have not found him unsound at the foundation. He has doubtless done admirable service to the cause of linguistics by spreading information respecting it, and awakening a degree of appreciation and love of it through a very large class of readers ; but it admits of question how nearly equal an amount of harm he has done by spreading false views and obstructing better light ; and,

at any rate, the latter kind of influence tends more and more to preponderate over the other. If we did not feel this, and feel it strongly, we should be very slow to write of him as we have done here, and elsewhere in this Review. Certainly, there is no man living who is more excessively over-estimated and over-praised than he; to a considerable part of the English-speaking community, implicit and unreasoning faith in him is almost an element of their religion, and a false element, which, in the interest of truth, cannot be too soon destroyed.

4.—*The Life of Nathanael Greene, Major-General in the Army of the Revolution.* By GEORGE WASHINGTON GREENE. Vols. II., III. New York: Hurd and Houghton. 1871. 8vo. pp. 514, 571.

WE are approaching the close of a century from our Revolutionary epoch, yet no work of a competent pen true to the record and the incident, judicial in the estimate of actors and prime leaders, and faithful in the relation of its political and military course, has yet been produced on either side of the water. A library of materials for it exists in print, and a mass of equal amount of authentic and interesting documents of prime importance in the relation are still in manuscript. There are those who fear that the very wealth and cumbrousness of the contributions made to such a history already in print have overlaid the theme and rendered it unlikely that any one will ever digest them into a continuous, lucid, and adequate narrative. The character of those materials, besides their bulk, offers a very serious embarrassment to any one who should attempt to deal with them judicially. They are filled with elements of strife, of personal variance, and controverted statements. Sit down to the perusal of one of the voluminous biographies, with the correspondence and official papers of one of the generals, members of Congress, or diplomatic agents of the Revolution, set forth and annotated by his special champion, and if you would follow the cross references which the pleas or explanations involve, you will find that you are heaping around you a whole cart-load of solid octavos.

Such an essay as Mr. Bancroft made towards the production of a History of the American Revolution brought upon him a phalanx of the outraged grandsons of the chief actors in the war to vindicate the fame of their ancestors against his aspersions and alleged misrepresentations.

The most thoroughly qualified and competent of our historical students who has ever faced the great undertaking was Mr. Sparks. By

actual research and a full acquaintance with the original and authoritative materials of the history, by the collection of all collateral information, and above all by his noble personal qualities of mind, conscience, and spirit, his moderation, candor, and nobleness of heart, he had become fitted for a task which would crown the ambition of his laborious life. Nor did he, as even many of his friends supposed, ever give over his purpose. He resigned the presidency of Harvard College that he might accomplish the work, and he died with his hands and thoughts still intent upon it.

Professor Greene, in the now completed biography of his grandfather, Major-General Greene, on which he has bestowed the faithful labor of more than a score of years, has made one of the most valuable and important of all the contributions to that cumbrous library of American history. We have now before us his second and third volumes. The first of the three has already been noticed in this Review. The general commendation which we had to bestow on the earlier portion of the work needs no abatement, but might justly be increased and heightened by us as we have followed his well-wrought narrative to its close. The interest and importance of the special subjects which he has had to present in them, and the peculiar skill and delicacy which they have required in their treatment,—alike for a rigidly accurate statement of facts and a cautious tone of judgment,—have carried us through the work with an unflagging attention and a sympathy of feeling with the writer. Had disaster or proved incapacity been visited upon Washington, it is probable that Greene would have acceded to his place of command and of responsibility. A knowledge of this fact, with the natural working of the imagination on the possibility of the contingency, of course induces the reader of these volumes to peruse them with a quickened and intensified critical engagement of curiosity, that he may measure the abilities and qualities of their subject.

Greene, like Washington, was a yeoman of the soil, and, if somewhat below him in the social scale and in the surroundings of circumstance and opportunity in case a peaceful tenor of life had fallen to them respectively, the subordinate was not inferior to his principal in mental capacity or in moral dignity. Greene, however, had not the reticence, nor the self-isolation, nor the restraint of tongue and judgment which characterized Washington. We recall here an amusing anecdote which we heard from the genial lips of President Sparks,—the best of the biographers, as he was also the fondest of the admirers of our great chief. On one occasion when Mr. Sparks was visiting the elder President Adams at his home in Quincy, with whom he was to dine, as dinner was announced, the guest, on rising to accompany his host, had his

attention engaged upon a portrait of Washington, which represented him with especial fidelity in the compression of his closed lips. With a seeming impatience at the lingering gaze of the biographer which delayed his progress to the dinner, the frank old patriot pushed his guest forward with the remark, "That old wooden head knew how to keep his lips shut, and got a great deal more credit for it than for anything he ever said." Making allowance for the evident consciousness of the speaker that his own unlikeness to Washington in this respect had given him a loftier estimate of the restraint which he did not so habitually visit upon his own lips, we pardon the disrespect of the epithet for the sake of the emphatic commendation of the grace of silence.

General Greene, in his speech and letters, in the degree of freedom which he allowed himself in private conference and at the table, as to men and measures, the shortcomings of Congress and the conduct of campaigns, took a midway course between that of cautious reticence and of blunt frankness characteristic of the two noble-souled men just named. And this fact suggests to us alike one of the most striking excellences of the subject of these volumes and one of the most commendable traits and qualities exhibited in the writer of them. General Greene, with an unquestionable integrity and singleness of purpose, and an ardent and intelligent patriotism, was also a man of remarkable practical sagacity, and with a fair and honest regard for worldly thrift that became a husband and the father of children. While the freedom and even the existence of his country were at stake, so also was his neck and the moderate competency which came to him from his homestead and from the diligent working of his forge on the little water-course of Rhode Island. He acquiesced uncomplainingly in the fortunes of war, and in all those inevitable contingencies which attend the debates of men not accordant in judgment, and in all the risks which beset campaigns shifting their scenes over a wide extent of country. But he saw that all the perils of the time, and all the losses and woes which were threatened, and all the sufferings and sacrifices of the soldiers, were needlessly aggravated by the partisan partialities and indifference of many members of Congress, and the leading men in the several States, and by the lack of an unselfish generosity of spirit in many officers of high rank. Of these infelicities, annoyances, and provoking irritations of the seven years' struggle he allowed himself to speak and write with frank indignation, though still not without the measure of moderation and tolerance of human frailties. And his biographer has treated these disagreeable and painful subjects, occasionally bearing hard upon the repute and the record of prominent individual actors, with a judicial

and restrained, but still with an open freedom, demanded by impartial history.

The second volume of the work opens with a very lucid and sufficiently full account of the so-called Conway's Cabal. Admitting whatever occasion there was—and at best it was slight—for the uneasiness and distrust felt towards the Commander-in-Chief for his seeming delays, failures, and uncommunicativeness as to his plans, the biographer very skilfully traces the working of petty jealousies, underhand manœuvrings, and personal rivalries, piques, and grudges in this conspiracy, which, as we now look back upon it, seems to have come nearer to success than the patriotism of the time really apprehended. When the secret actors and plottings of the cabal came within the knowledge of Greene, his honest manliness and his indignation furnished one of the proudest tokens of the place which Washington had won in the confidence of those who, being nearest to him in intercourse and divided responsibility, could best appreciate the task which came to him and the spirit in which he met it. Candor, however, requires the admission that the circumstances of the time furnished occasion for the restlessness and discontent which found as harmless a manifestation in this cabal as they would have developed through any other outlet. Professor Greene deals with Gates discriminately, and with a bias to leniency. He presents very frankly the emergent dangers of the situation, and exhibits with full evidence the general loyalty of both army and people to Washington, as well as what we can describe only as the *intentional* fidelity of Congress to its trust. The discomfiture and the humble retraction of Conway attested the flimsiness of his shallow plottings.

Next we have the careful and thoroughly verified rehearsal by the biographer, of his grandfather's discharge of the office of Quartermaster-General of the American Army. The pages of this Review have given full place to the pleadings and charges of Mr. Bancroft, and to the replications of Professor Greene on this subject. We have no call here to act as judge or umpire in the case. The papers which contain the matters of controversy between the historian and the biographer are reprinted at length in this volume, in an appendix. We can but say, however, that the biographer has given a complete vindication of the ability, the fidelity, and the integrity of General Greene; showing, from the documents, the evidence and the facts of the case, that the service had been carelessly and ineffectively performed; that it was forced upon Greene, against his wish or interest; that it was reluctantly accepted from motives of patriotism; that it was invested with manifold embarrassments, and could not possibly have been discharged by any one without raising collisions and animosities; and that,

after meeting infinite perplexities and doing the hardest work in the office, he made it comparatively easy for his successor, Colonel Pickering. The campaigns of 1778 – 1780, with the evacuation of Philadelphia and Newport, are duly chronicled. The French alliance, with the new jealousies and complications which it brought with it, threatening for a time to render it inoperative for our advantage; the experiments, failures, alarms, and feuds connected with the worthless and disordered paper currency and the Continental treasury; the sectional variances, intrigues, and cross-purposes of the time, all threatening disasters which the lack of centralized authority in Congress made it powerless to grapple with or avert; — these matters, which put the reader of these days into a state of fretfulness and irritation as he reads of them, are all related and discussed by the biographer with a well-proportioned degree of detail, with a thorough knowledge of the men, the incidents, and the circumstances, and with an admirable discretion and impartiality. The occasional revelations which we have in letters of Greene's private feelings and of his strong domestic affections furnish a grateful relief to the troubled pages of the narrative.

In the third and last volume Professor Greene gives us the history of the last Southern campaign of the war of the Revolution, as under the conduct of Major-General Greene, and which came to a successful close in season to contribute its share towards securing our national independence by the Treaty of Peace in 1783. The General's life was lengthened by only three years after this event. The hardships and exhaustive anxieties and journeys of the campaign had told upon his once vigorous constitution. Only his own rigidly pure, temperate, and careful habits would have sustained him through the arduous work which he had performed. Greene acceded to the command of the Southern army — if that word, with the associations of its modern use, can be applied to the ephemeral, unorganized, undisciplined, and ever-changing bodies of continentals, militia, partisan, and volunteer squads, over which he had but a confused authority — at the most critical and cheerless stage of the long conflict. The promiscuous and unstable elements of his camp, less than two thousand serviceable men, which we have but imperfectly characterized in the epithets just used, gave him constant annoyance, and left him in uncertainty from day to day as to the numbers which he could put to service and as to whether they would obey his orders. He acceded to his command immediately after the failure of General Gates and his most disastrous discomfiture. It had been by the unwise favoritism of Congress that Gates had been assigned a position and a responsibility for which he was eminently unfitted, — not so much from any defect of will or purpose, as through

lack of judgment, discretion, and those comprehensive qualities of caution, calculation, and care for minute details and conditions in which Greene as eminently excelled. Gates, too, had had, though a small, yet a well-disciplined army of large experience in the kind of service they were to perform, and overflowing with patriotic ardor guided by a soldierly spirit. They had been used to toilsome marches and to severe self-denial. They had likewise good subordinate officers, whom they cheerfully obeyed and in whom they reposed a hearty confidence. Gates had put himself hastily at the head of these troops, with the noble and heroic De Kalb as a pillar of his strength, and at once ordered a march. But he seems to have formed no plan of a campaign, recognizing only, as a main object, the driving of the British out of Charleston. He had made but the slenderest provision for his commissariat, and the supplies which he had looked for failed him. His route, which he seems to have left to the decision of some daily chances, as he was ignorant of the face of the country in detail, precluded the collection of needful stores at appointed stations and rendezvous. And this route was itself all but recklessly chosen as the alternative of another which was far preferable. It led him through swamps and barren sand-tracks, morasses, unsettled and unexplored regions where he had no trustworthy guides, and across watercourses which, fordable one day, might by the rain of a few hours be spread into lakes or swollen into impassable torrents with treacherous bars and currents. Haunting on his flanks and rear at various points were the scoundrels who, under the name of Tories, had stripped intervening spaces of tilled territory of their stock and produce, and were ready to shoot down stragglers. That these pests of the region were equally ready to make a spoil of detached bodies of the British soldiers and of their own countrymen in the ranks, did not tend to elevate their character or to qualify their atrocities. On the banks of the Pedee, as Gates's miserable array toiled on, they gorged themselves with the milky ears of the unripe corn, in the failure of their promised salt and rum and rations. Of course enfeebling disease struck down the men who thus gratified their hunger. The more considerate officers escaped by shunning the tempting indulgence, and confining themselves to a *soupe maigre*, made out of the scraggy cattle which good luck occasionally threw in their way, and thickened by a stirring in of hair-powder. It was such an army, in such a condition, that Cornwallis encountered. His victory over it, glorified in the English gazettes, was soon to yield to his own mortifying capitulation,—the decisive event of the war. But that victory, which there was every reason for anticipating, was for the time terribly depressing to our side. Though the Marylanders bravely

stood the charge, they could not bear the shock of Tarleton's cavalry. De Kalb fell with eleven wounds, after his horse had been shot under him. The little demoralized American army took to flight, most of them plied by chance supplies of liquor, and the remnant gathered sixty miles from the scene of the disaster, to establish what was called head-quarters at Charlotte. About the same time Sumter was surprised and defeated at Fishing Creek. The British still held Charleston, to carry on a war of posts, and both the Carolinas and Georgia were divided from the imaginary rule of Congress, while all the horrors of intestine strife were visited upon them.

It was under such circumstances that Greene was appointed to his Southern command, and left Philadelphia in November, accompanied by Steuben, for the aforesaid head-quarters at Charlotte. It is an exhibition of his own magnanimity and generosity of soul, and of his kindly as well as intelligent view of all the circumstances, that, though his previous relations with Gates had been far from cordial or confiding, he yet in his letters wrote most leniently about the misfortunes of his predecessor, and put the most tolerant and lenient construction upon his failure.

Whether taught by that failure, or simply in the exercise of his own sterling qualities as a man and an eminently accomplished military officer, Greene gave his chief attention to the very conditions about which Gates had been most heedless, if not reckless. He frankly and fully made known to Congress his views of the situation, and stated the absolute demands which the soldiers through him enforced upon that body. He established a direct correspondence with the executives and the representatives of the civil authority in the Middle and Southern States. He made himself thoroughly acquainted with his officers and those of the volunteer and partisan corps which followed them. It is easy to see that he humored the whims and the self-consequence of some of the popular leaders, civil and military; but he did this as a shrewdly allowed condition for insisting upon his own authority in matters where individual caprice must yield to one who was charged with responsibility. He required daily exact returns of the number and the condition of the army,—that army which could never count three thousand men. By the trial, conviction, and summary execution of a prominent offender of that sort, he put a stop to the gross license by which the soldiers had habituated themselves to leaving camp and strolling about or visiting their homes at their own free pleasure. He strained every nerve and wrote reams of letters of importunate appeal to provide supplies of clothing for his men, many of whom were literally naked to the skin, and could not show themselves out of their huts or the bushes, to gather,

for them something that might be called rations, as well as to secure boats and rafts for the frequent watercourses and depots of stores along the route. Wagons and horses were sought for in vain. Hard money, except in some rare spots and pockets,—that of the British,—had disappeared. Continental and provincial paper, depreciated to the rate of a hundred for one, was hard to be got, and worth but little when obtained. Traders and hucksters would not part with the few goods they had, save for fabulous sums in paper, sometimes only for cash. Greene's promise to pay was worth more than that of States and Congress altogether. It was by giving his indorsement to business contracts, on which the very existence of his army was staked, that he became involved in obligations of no pecuniary consideration for himself, which followed him after the peace, involved him in long and weary litigation, reduced his own slender means, imbibited his last days, and even, for a brief time, and from some calumnious detractors, associated reproach with his own pure name and spotless career.

Amid frequent straits, with changing fortunes, not without bitter disappointments and crushing disasters, Greene's fidelity and ability, aided by several favoring circumstances attending in other scenes the close of the war and the preliminaries for negotiation, were rewarded with proud and grateful success. His campaigns, marches, skirmishes, manœuvres, disasters, and successes are described with a graphic pen by his biographer, after most careful and minute survey of the scenes, with the skill of a painter in the delineation of the natural features, aspects, and phenomena of the country, and with the taste and judgment and full mind of an accomplished historical student and man of letters. His subject was worthy of his filial admiration and reverence. No sympathizing reader would abate from the eulogy or the warmth of the pages.

The General's journey homewards, on horseback or in carriage, was an ovation all the way, with demonstrations of honor and sumptuous hospitalities, dinners, representations, festivities, and addresses in every village centre, and in all the towns and cities. There is something quaint and curious in the seemingly far-off and old-time forms and means and concomitants of these ways of doing homage to the victorious General of the South. The biographer has incidentally given us here some charming pictures. Equally engaging, and of high value in the thread of his narrative, and for permanent historic value, are the very striking portraiture and biographies drawn by Professor Greene in episodical paragraphs of the patriot leaders and partisan officers who served with Greene,—Daniel Morgan, Isaac Huger, Otho Williams, Light Horse (Harry Lee), John E. Howard, Francis Marion, and

others less conspicuous. There is a romance in the life of each of these men. Novels and tragedies were crowded into their life-stories.

General Greene returned to his home in Rhode Island, impoverished in estate, but to a happy household, seeing all his children together for the first time. The gratitude of his Southern friends put him in possession of plantations in South Carolina and Georgia. The former he was compelled by pecuniary embarrassments already referred to to sell. He intended to make his winter home at the other, where a fine mansion with spacious and ornamented grounds promised thrift for years to come on the outlay of patient labor. Here he enjoyed for a brief season the delights of domestic life. But here he died from the effects of a sunstroke received on June 12, 1786, while he was viewing the rice-fields of a neighbor.

The three volumes now finding an honored place in our libraries, with the consecration of a patriot's proud fame by filial love, industry, and high literary skill, contain lessons for the times before us.

5.—*The Works of GEORGE BERKELEY, D. D., formerly Bishop of Cloyne: including many of his Writings hitherto unpublished.* With Prefaces, Annotations, his Life and Letters, and an Account of his Philosophy. By ALEXANDER CAMPBELL FRASER, M. A., Professor of Logic and Metaphysics in the University of Edinburgh. In Four Volumes. Oxford: At the Clarendon Press. 8vo. 1871.

THIS new edition of Berkeley's works is much superior to any of the former ones. It contains some writings not in any of the other editions, and the rest are given with a more carefully edited text. The editor has done his work well. The introductions to the several pieces contain analyses of their contents which will be found of the greatest service to the reader. On the other hand, the explanatory notes which disfigure every page seem to us altogether unnecessary and useless.

Berkeley's metaphysical theories have at first sight an air of paradox and levity very unbecoming to a bishop. He denies the existence of matter, our ability to see distance, and the possibility of forming the simplest general conception; while he admits the existence of Platonic ideas; and argues the whole with a cleverness which every reader admits, but which few are convinced by. His disciples seem to think the present moment a favorable one for obtaining for their philosophy a more patient hearing than it has yet got. It is true that we of this day are sceptical and not given to metaphysics, but so, say they, was the generation which Berkeley addressed, and for which his style was

chosen; while it is hoped that the spirit of calm and thorough inquiry which is now, for once, almost the fashion, will save the theory from the perverse misrepresentations which formerly assailed it, and lead to a fair examination of the arguments which, in the minds of his sectarians, put the truth of it beyond all doubt. But above all it is anticipated that the Berkeleyan treatment of that question of the validity of human knowledge and of the inductive process of science, which is now so much studied, is such as to command the attention of scientific men to the idealistic system. To us these hopes seem vain. The truth is that the minds from whom the spirit of the age emanates have now no interest in the only problems that metaphysics ever pretended to solve. The abstract acknowledgment of God, Freedom, and Immortality, apart from those other religious beliefs (which cannot possibly rest on metaphysical grounds) which alone may animate this, is now seen to have no practical consequence whatever. The world is getting to think of these creatures of metaphysics, as Aristotle of the Platonic ideas: *τερετίσματα γάρ ἔστι, καὶ εἴ ἔστιν, οὐδὲν πρὸς τὸν λόγον ἔστιν.* The question of the grounds of the validity of induction has, it is true, excited an interest, and may continue to do so (though the argument is now become too difficult for popular apprehension); but whatever interest it has had has been due to a hope that the solution of it would afford the basis for sure and useful maxims concerning the logic of induction,—a hope which would be destroyed so soon as it were shown that the question was a purely metaphysical one. This is the prevalent feeling, among advanced minds. It may not be just; but it exists. And its existence is an effectual bar (if there were no other) to the general acceptance of Berkeley's system. The few who do now care for metaphysics are not of that bold order of minds who delight to hold a position so unsheltered by the prejudices of common sense as that of the good bishop.

As a matter of history, however, philosophy must always be interesting. It is the best representative of the mental development of each age. It is so even of ours, if we think what really is our philosophy. Metaphysical history is one of the chief branches of history, and ought to be expounded side by side with the history of society, of government, and of war; for in its relations with these we trace the significance of events for the human mind. The history of philosophy in the British Isles is a subject possessing more unity and entirety within itself than has usually been recognized in it. The influence of Descartes was never so great in England as that of traditional conceptions, and we can trace a continuity between modern and mediæval thought there, which is wanting in the history of France, and still more, if possible, in that of Germany.

From very early times, it has been the chief intellectual characteristic of the English to wish to effect everything by the plainest and directest means, without unnecessary contrivance. In war, for example, they rely more than any other people in Europe upon sheer hardihood, and rather despise military science. The main peculiarities of their system of law arise from the fact that every evil has been rectified as it became intolerable, without any thoroughgoing measure. The bill for legalizing marriage with a deceased wife's sister is yearly pressed because it supplies a remedy for an inconvenience actually felt; but nobody has proposed a bill to legalize marriage with a deceased husband's brother. In philosophy, this national tendency appears as a strong preference for the simplest theories, and a resistance to any complication of the theory as long as there is the least possibility that the facts can be explained in the simpler way. And, accordingly, British philosophers have always desired to weed out of philosophy all conceptions which could not be made perfectly definite and easily intelligible, and have shown strong nominalistic tendencies since the time of Edward I., or even earlier. Berkeley is an admirable illustration of this national character, as well as of that strange union of nominalism with Platonism, which has repeatedly appeared in history, and has been such a stumbling-block to the historians of philosophy.

The mediaeval metaphysic is so entirely forgotten, and has so close a historic connection with modern English philosophy, and so much bearing upon the truth of Berkeley's doctrine, that we may perhaps be pardoned a few pages on the nature of the celebrated controversy concerning universals. And first let us set down a few dates. It was at the very end of the eleventh century that the dispute concerning nominalism and realism, which had existed in a vague way before, began to attain extraordinary proportions. During the twelfth century it was the matter of most interest to logicians, when William of Champeaux, Abélard, John of Salisbury, Gilbert de la Porrée, and many others, defended as many different opinions. But there was no historic connection between this controversy and those of scholasticism proper, the scholasticism of Aquinas, Scotus, and Ockam. For about the end of the twelfth century a great revolution of thought took place in Europe. What the influences were which produced it requires new historical researches to say. No doubt, it was partly due to the Crusades. But a great awakening of intelligence did take place at that time. It requires, it is true, some examination to distinguish this particular movement from a general awakening which had begun a century earlier, and had been growing stronger ever since. But now there was an accelerated impulse. Commerce was attaining new importance, and was in-

venting some of her chief conveniences and safeguards. Law, which had hitherto been utterly barbaric, began to be a profession. The civil law was adopted in Europe, the canon law was digested; the common law took some form. The Church, under Innocent III., was assuming the sublime functions of a moderator over kings. And those orders of mendicant friars were established, two of which did so much for the development of the scholastic philosophy. Art felt the spirit of a new age, and there could hardly be a greater change than from the highly ornate round-arched architecture of the twelfth century to the comparatively simple Gothic of the thirteenth. Indeed, if any one wishes to know what a scholastic commentary is like, and what the tone of thought in it is, he has only to contemplate a Gothic cathedral. The first quality of either is a religious devotion, truly heroic. One feels that the men who did these works did really believe in religion as we believe in nothing. We cannot easily understand how Thomas Aquinas can speculate so much on the nature of angels, and whether ten thousand of them could dance on a needle's point. But it was simply because he held them for real. If they are real, why are they not more interesting than the bewildering varieties of insects which naturalists study; or why should the orbits of double stars attract more attention than spiritual intelligences? It will be said that we have no means of knowing anything about them. But that is on a par with censuring the schoolmen for referring questions to the authority of the Bible and of the Church. If they really believed in their religion, as they did, what better could they do? And if they found in these authorities testimony concerning angels, how could they avoid admitting it. Indeed, objections of this sort only make it appear still more clearly how much those were the ages of faith. And if the spirit was not altogether admirable, it is only because faith itself has its faults as a foundation for the intellectual character. The men of that time did fully believe and did think that, for the sake of giving themselves up absolutely to their great task of building or of writing, it was well worth while to resign all the joys of life. Think of the spirit in which Duns Scotus must have worked, who wrote his thirteen volumes in folio, in a style as condensed as the most condensed parts of Aristotle, before the age of thirty-four. Nothing is more striking in either of the great intellectual products of that age, than the complete absence of self-conceit on the part of the artist or philosopher. That anything of value can be added to his sacred and catholic work by its having the smack of individuality about it, is what he has never conceived. His work is not designed to embody *his* ideas, but the universal truth; there will not be one thing in it however minute, for which you will not find that he has his authority;

and whatever originality emerges is of that inborn kind which so saturates a man that he cannot himself perceive it. The individual feels his own worthlessness in comparison with his task, and does not dare to introduce his vanity into the doing of it. Then there is no machine-work, no unthinking repetition about the thing. . Every part is worked out for itself as a separate problem, no matter how analogous it may be in general to another part. And no matter how small and hidden a detail may be, it has been conscientiously studied, as though it were intended for the eye of God. Allied to this character is a detestation of antithesis or the studied balancing of one thing against another, and of a too geometrical grouping, — a hatred of posing which is as much a moral trait as the others. Finally, there is nothing in which the scholastic philosophy and the Gothic architecture resemble one another more than in the gradually increasing sense of immensity which impresses the mind of the student as he learns to appreciate the real dimensions and cost of each. It is very unfortunate that the thirteenth, fourteenth, and fifteenth centuries should, under the name of Middle Ages, be confounded with others, which they are in every respect as unlike as the Renaissance is from modern times. In the history of logic, the break between the twelfth and thirteenth centuries is so great that only one author of the former age is ever quoted in the latter. If this is to be attributed to the fuller acquaintance with the works of Aristotle, to what, we would ask, is this profounder study itself to be attributed, since it is now known that the knowledge of those works was not imported from the Arabs? The thirteenth century was realistic, but the question concerning universals was not as much agitated as several others. Until about the end of the century, scholasticism was somewhat vague, immature, and unconscious of its own power. Its greatest glory was in the first half of the fourteenth century. Then Duns Scotus,* a Briton (for whether Scotch, Irish, or English is disputed), first stated the realistic position consistently, and developed it with great fulness and applied it to all the different questions which depend upon it. His theory of "formalities" was the subtlest, except perhaps Hegel's logic, ever broached, and he was separated from nominalism only by the division of a hair. It is not therefore surprising that the nominalistic position was soon adopted by several writers, especially by the celebrated William of Ockam, who took the lead of this party by the thorough-going and masterly way in which he treated the theory and combined it with a then rather recent but now forgotten addition to the doctrine of logical terms. With Ockam, who died in 1347, scholasticism may be said to have culminated. After him the scholastic philosophy showed

* Died 1308.

a tendency to separate itself from the religious element which alone could dignify it, and sunk first into extreme formalism and fancifulness, and then into the merited contempt of all men; just as the Gothic architecture had a very similar fate, at about the same time, and for much the same reasons.

The current explanations of the realist-nominalist controversy are equally false and unintelligible. They are said to be derived ultimately from Bayle's Dictionary; at any rate, they are not based on a study of the authors. "Few, very few, for a hundred years past," says Hallam, with truth, "have broken the repose of the immense works of the schoolmen." Yet it is perfectly possible so to state the matter that no one shall fail to comprehend what the question was, and how there might be two opinions about it. Are universals real? We have only to stop and consider a moment what was meant by the word *real*, when the whole issue soon becomes apparent. Objects are divided into figments, dreams, etc., on the one hand, and realities on the other. The former are those which exist only inasmuch as you or I or some man imagines them; the latter are those which have an existence independent of your mind or mine or that of any number of persons. The real is that which is not whatever we happen to think it, but is unaffected by what we may think of it. The question, therefore, is whether *man*, *horse*, and other names of natural classes, correspond with anything which all men, or all horses, really have in common, independent of our thought, or whether these classes are constituted simply by a likeness in the way in which our minds are affected by individual objects which have in themselves no resemblance or relationship whatsoever. Now that this is a real question which different minds will naturally answer in opposite ways, becomes clear when we think that there are two widely separated points of view, from which *reality*, as just defined, may be regarded. Where is the real, the thing independent of how we think it, to be found? There must be such a thing, for we find our opinions constrained; there is something, therefore, which influences our thoughts, and is not created by them. We have, it is true, nothing immediately present to us but thoughts. Those thoughts, however, have been caused by sensations, and those sensations are constrained by something out of the mind. This thing out of the mind, which directly influences sensation, and through sensation thought, because it is out of the mind, is independent of how we think it, and is, in short, the real. Here is one view of reality, a very familiar one. And from this point of view it is clear that the nominalistic answer must be given to the question concerning universals. For, while from this stand-point it may be admitted to be

true as a rough statement that one man is like another, the exact sense being that the realities external to the mind produce sensations which may be embraced under one conception, yet it can by no means be admitted that the two real men have really anything in common, for to say that they are both men is only to say that the one mental term or thought-sign "man" stands indifferently for either of the sensible objects caused by the two external realities; so that not even the two sensations have in themselves anything in common, and far less is it to be inferred that the external realities have. This conception of reality is so familiar, that it is unnecessary to dwell upon it; but the other, or realist conception, if less familiar, is even more natural and obvious. All human thought and opinion contains an arbitrary, accidental element, dependent on the limitations in circumstances, power, and bent of the individual; an element of error, in short. But human opinion universally tends in the long run to a definite form, which is the truth. Let any human being have enough information and exert enough thought upon any question, and the result will be that he will arrive at a certain definite conclusion, which is the same that any other mind will reach under sufficiently favorable circumstances. Suppose two men, one deaf, the other blind. One hears a man declare he means to kill another, hears the report of the pistol, and hears the victim cry; the other sees the murder done. Their sensations are affected in the highest degree with their individual peculiarities. The first information that their sensations will give them, their first inferences, will be more nearly alike, but still different; the one having, for example, the idea of a man shouting, the other of a man with a threatening aspect; but their final conclusions, the thought the remotest from sense, will be identical and free from the one-sidedness of their idiosyncrasies. There is, then, to every question a true answer, a final conclusion, to which the opinion of every man is constantly gravitating. He may for a time recede from it, but give him more experience and time for consideration, and he will finally approach it. The individual may not live to reach the truth; there is a residuum of error in every individual's opinions. No matter; it remains that there is a definite opinion to which the mind of man is, on the whole and in the long run, tending. On many questions the final agreement is already reached, on all it will be reached if time enough is given. The arbitrary will or other individual peculiarities of a sufficiently large number of minds may postpone the general agreement in that opinion indefinitely; but it cannot affect what the character of that opinion shall be when it is reached. This final opinion, then, is independent, not indeed of thought in general, but of all that is arbitrary and individual in thought; is

quite independent of how you, or I, or any number of men think. Everything, therefore, which will be thought to exist in the final opinion is real, and nothing else. What is the power of external things, to affect the senses? To say that people sleep after taking opium because it has a soporific *power*, is that to say anything in the world but that people sleep after taking opium because they sleep after taking opium? To assert the existence of a power or potency, is it to assert the existence of anything actual? Or to say that a thing has a potential existence, is it to say that it has an actual existence? In other words, is the present existence of a power anything in the world but a regularity in future events relating to a certain thing regarded as an element which is to be taken account of beforehand, in the conception of that thing? If not, to assert that there are external things which can be known only as exerting a power on our sense, is nothing different from asserting that there is a general *drift* in the history of human thought which will lead it to one general agreement, one catholic consent. And any truth more perfect than this destined conclusion, any reality more absolute than what is thought in it, is a fiction of metaphysics. It is obvious how this way of thinking harmonizes with a belief in an infallible Church, and how much more natural it would be in the Middle Ages than in Protestant or positivist times.

This theory of reality is instantly fatal to the idea of a thing in itself, — a thing existing independent of all relation to the mind's conception of it. Yet it would by no means forbid, but rather encourage us, to regard the appearances of sense as only signs of the realities. Only, the realities which they represent would not be the unknowable cause of sensation, but *noumena*, or intelligible conceptions which are the last products of the mental action which is set in motion by sensation. The matter of sensation is altogether accidental; precisely the same information, practically, being capable of communication through different senses. And the catholic consent which constitutes the truth is by no means to be limited to men in this earthly life or to the human race, but extends to the whole communion of minds to which we belong, including some probably whose senses are very different from ours, so that in that consent no predication of a sensible quality can enter, except as an admission that so certain sorts of senses are affected. This theory is also highly favorable to a belief in external realities. It will, to be sure, deny that there is any reality which is absolutely incognizable in itself, so that it cannot be taken into the mind. But observing that "the external" means simply that which is independent of what phenomenon is immediately present, that is of how we may think or feel; just as "the real" means that which is independent of how we

may think or feel *about it*; it must be granted that there are many objects of true science which are external, because there are many objects of thought which, if they are independent of that thinking whereby they are thought (that is, if they are real), are indisputably independent of all *other* thoughts and feelings.

It is plain that this view of reality is inevitably realistic; because general conceptions enter into all judgments, and therefore into true opinions. Consequently a thing in the general is as real as in the concrete. It is perfectly true that all white things have whiteness in them, for that is only saying, in another form of words, that all white things are white; but since it is true that real things possess whiteness, whiteness is real. It is a real which only exists by virtue of an act of thought knowing it, but that thought is not an arbitrary or accidental one dependent on any idiosyncrasies, but one which will hold in the final opinion.

This theory involves a phenomenism. But it is the phenomenism of Kant, and not that of Hume. Indeed, what Kant called his Copernican step was precisely the passage from the nominalistic to the realistic view of reality. It was the essence of his philosophy to regard the real object as determined by the mind. That was nothing else than to consider every conception and intuition which enters necessarily into the experience of an object, and which is not transitory and accidental, as having objective validity. In short, it was to regard the reality as the normal product of mental action, and not as the incognizable cause of it.

This realistic theory is thus a highly practical and common-sense position. Wherever universal agreement prevails, the realist will not be the one to disturb the general belief by idle and fictitious doubts. For according to him it is a consensus or common confession which constitutes reality. What he wants, therefore, is to see questions put to rest. And if a general belief, which is perfectly stable and immovable, can in any way be produced, though it be by the fagot and the rack, to talk of any error in such belief is utterly absurd. The realist will hold that the very same objects which are immediately present in our minds in experience really exist just as they are experienced out of the mind; that is, he will maintain a doctrine of immediate perception. He will not, therefore, sunder existence out of the mind and being in the mind as two wholly disproportionate modes. When a thing is in such relation to the individual mind that that mind cognizes it, it is in the mind; and its being so in the mind will not in the least diminish its external existence. For he does not think of the mind as a receptacle, which if a thing is in, it ceases to be out of. To make a

distinction between the true conception of a thing and the thing itself is, he will say, only to regard one and the same thing from two different points of view ; for the immediate object of thought in a true judgment *is* the reality. The realist will, therefore, believe in the objectivity of all necessary conceptions, space, time, relation, cause, and the like.

No realist or nominalist ever expressed so definitely, perhaps, as is here done, his conception of reality. It is difficult to give a clear notion of an opinion of a past age, without exaggerating its distinctness. But careful examination of the works of the schoolmen will show that the distinction between these two views of the real — one as the fountain of the current of human thought, the other as the unmoving form to which it is flowing — is what really occasions their disagreement on the question concerning universals. The gist of all the nominalist's arguments will be found to relate to a *res extra animam*, while the realist defends his position only by assuming that the immediate object of thought in a true judgment is real. The notion that the controversy between realism and nominalism had anything to do with Platonic ideas is a mere product of the imagination, which the slightest examination of the books would suffice to disprove. But to prove that the statement here given of the essence of these positions is historically true and not a fancy sketch, it will be well to add a brief analysis of the opinions of Scotus and Ockam.

Scotus sees several questions confounded together under the usual *utrum universale est aliquid in rebus*. In the first place, there is the question concerning the Platonic forms. But putting Platonism aside as at least incapable of proof, and as a self-contradictory opinion if the archetypes are supposed to be strictly universal, there is the celebrated dispute among Aristotelians as to whether the universal is really in things or only derives its existence from the mind. Universality is a relation of a predicate to the subjects of which it is predicated. That can exist only in the mind, wherein alone the coupling of subject and predicate takes place. But the word *universal* is also used to denote what are named by such terms as *a man* or *a horse* ; these are called universals, because a man is not necessarily this man, nor a horse this horse. In such a sense it is plain universals are real ; there really is a man and there really is a horse. The whole difficulty is with the actually indeterminate universal, that which not only is not necessarily *this*, but which, being one single object of thought, is predicable of many things. In regard to this it may be asked, first, is it necessary to its existence that it should be in the mind ; and, second, does it exist *in re* ? There are two ways in which a thing may be in the mind, — *habitualiter* and *actualiter*. A notion is

in the mind *actualiter* when it is actually conceived; it is in the mind *habitualiter* when it can directly produce a conception. It is by virtue of mental association (we moderns should say), that things are in the mind *habitualiter*. In the Aristotelian philosophy, the intellect is regarded as being to the soul what the eye is to the body. The mind *perceives* likenesses and other relations in the objects of sense, and thus just as sense affords sensible images of things; so the intellect affords intelligible images of them. It is as such a *species intelligibilis* that Scotus supposes that a conception exists which is in the mind *habitualiter*, not *actualiter*. This *species* is in the mind, in the sense of being the immediate object of knowledge, but its existence in the mind is independent of *consciousness*. Now that the *actual* cognition of the universal is necessary to its existence, Scotus denies. The subject of science is universal; and if the existence of universal were dependent upon what we happened to be thinking, science would not relate to anything real. On the other hand, he admits that the universal must be in the mind *habitualiter*, so that if a thing be considered as it is independent of its being cognized, there is no universality in it. For there is *in re extra* no one intelligible object attributed to different things. He holds, therefore, that such natures (i. e. sorts of things) as a *man* and a *horse*, which are real, and are not of themselves necessarily *this* man or *this* horse, though they cannot exist *in re* without being some particular man or horse, are in the *species intelligibilis* always represented positively indeterminate, it being the nature of the mind so to represent things. Accordingly any such nature is to be regarded as something which is of itself neither universal nor singular, but is universal in the mind, singular in things out of the mind. If there were nothing in the different men or horses which was not of itself singular, there would be no real unity except the numerical unity of the singulars; which would involve such absurd consequences as that the only real difference would be a numerical difference, and that there would be no real likenesses among things. If, therefore, it is asked whether the universal is in things, the answer is, that the nature which in the mind is universal, and is not in itself singular, exists in things. It is the very same nature which in the mind is universal and *in re* is singular; for if it were not, in knowing anything of a universal we should be knowing nothing of things, but only of our own thoughts, and our opinion would not be converted from true to false by a change in things. This nature is actually indeterminate only so far as it is in the mind. But to say that an object is in the mind is only a metaphorical way of saying that it stands to the intellect in the relation of known to knower. The truth is, therefore, that that real nature which exists *in re*, apart from all

action of the intellect, though in itself, apart from its relations, it be singular, yet is actually universal as it exists in relation to the mind. But this universal only differs from the singular in the manner of its being conceived (*formaliter*), but not in the manner of its existence (*realiter*).

Though this is the slightest possible sketch of the realism of Scotus, and leaves a number of important points unnoticed, yet it is sufficient to show the general manner of his thought and how subtle and difficult his doctrine is. That about one and the same nature being in the grade of singularity in existence, and in the grade of universality in the mind, gave rise to an extensive doctrine concerning the various kinds of identity and difference, called the doctrine of the *formalitates*; and this is the point against which Ockam directed his attack.

Ockam's nominalism may be said to be the next stage in English opinion. As Scotus's mind is always running on forms, so Ockam's is on logical terms; and all the subtle distinctions which Scotus effects by his *formalitates*, Ockam explains by implied syncategorematics (or adverbial expressions, such as *per se*, etc.) in terms. Ockam always thinks of a mental conception as a logical term, which, instead of existing on paper, or in the voice, is in the mind, but is of the same general nature, namely, a *sign*. The conception and the word differ in two respects: first, a word is arbitrarily imposed, while a conception is a natural sign; second, a word signifies whatever it signifies only indirectly, through the conception which signifies the same thing directly. Ockam enunciates his nominalism as follows: "It should be known that *singular* may be taken in two senses. In one sense, it signifies that which is one and not many; and in this sense those who hold that the universal is a quality of mind predicable of many, standing however in this predication, not for itself, but for those many (i. e. the nominalists), have to say that every universal is truly and really singular; because as every word, however general we may agree to consider it, is truly and really singular and one in number, because it is one and not many, so every universal is singular. In another sense, the name *singular* is used to denote whatever is one and not many, is a sign of something which is singular in the first sense, and is not fit to be the sign of many. Whence, using the word *universal* for that which is not one in number,—an acceptation many attribute to it,—I say that there is no universal; unless perchance you abuse the word and say that *people* is not one in number and is universal. But that would be puerile. It is to be maintained, therefore, that every universal is one singular thing, and therefore there is no universal except by signification, that is, by its being the sign of many." The arguments by which he sup-

ports this position present nothing of interest.* Against Scotus's doctrine that universals are without the mind in individuals, but are not really distinct from the individuals, but only formally so, he objects that it is impossible there should be any distinction existing out of the mind except between things really distinct. Yet he does not think of denying that an individual consists of matter and form, for these, though inseparable, are really distinct things; though a modern nominalist might ask in what sense things could be said to be distinct independently of any action of the mind, which are so inseparable as matter and form. But as to *relation*, he most emphatically and clearly denies that it exists as anything different from the things related; and this denial he expressly extends to relations of agreement and likeness as well as to those of opposition. While, therefore, he admits the real existence of qualities, he denies that these real qualities are respects in which things agree or differ; but things which agree or differ agree or differ in themselves and in no respect *extra animam*. He allows that things without the mind are similar, but this similarity consists merely in the fact that the mind can abstract one notion from the contemplation of them. A resemblance, therefore, consists solely in the property of the mind by which it naturally imposes one mental sign upon the resembling things. Yet he allows there is something in the things to which this mental sign corresponds.

This is the nominalism of Ockam so far as it can be sketched in a single paragraph, and without entering into the complexities of the Aristotelian psychology nor of the *parva logicalia*. He is not so thoroughgoing as he might be, yet compared with Durandus and other contemporary nominalists he seems very radical and profound. He is truly the *venerabilis inceptor* of a new way of philosophizing which has now broadened, perhaps deepened also, into English empiricism.

England never forgot these teachings. During that Renaissance period when men could think that human knowledge was to be advanced by the use of Cicero's Commonplaces, we naturally see little effect from them; but one of the earliest prominent figures in modern philosophy is a man who carried the nominalistic spirit into everything,— religion, ethics, psychology, and physics, the *plusquam nominalis*, Thomas Hobbes of Malmesbury. His razor cuts off, not merely substantial forms, but every incorporeal substance. As for universals, he not only denies their real existence, but even that there are any universal conceptions except so far as we conceive names. In every part of his logic, names

* The *entia non sunt multiplicanda praeter necessitatem* is the argument of Durand de St. Pourcain. But any given piece of popular information about scholasticism may be safely assumed to be wrong.

and speech play an extraordinarily important part. Truth and falsity, he says, have no place but among such creatures as use speech, for a true proposition is simply one whose predicate is the name of everything of which the subject is the name. "From hence, also, this may be deduced, that the first truths were arbitrarily made by those that first of all imposed names upon things, or received them from the imposition of others. For it is true (for example), that *man is a living creature*, but it is for this *reason* that it pleased men to impose both those names on the same thing." The difference between true religion and superstition is simply that the state recognizes the former and not the latter.

The nominalistic love of simple theories is seen also in his opinion, that every event is a movement, and that the sensible qualities exist only in sensible beings, and in his doctrine that man is at bottom purely selfish in his actions.

His views concerning matter are worthy of notice, because Berkeley is known to have been a student of Hobbes, as Hobbes confesses himself to have been of Ockam. The following paragraph gives his opinion : —

"And as for that matter which is common to all things, and which philosophers, following Aristotle, usually call *materia prima*, that is, *first matter*, it is not a body distinct from all other bodies, nor is it one of them. What then is it? A mere name; yet a name which is not of vain use; for it signifies a conception of body without the consideration of any form or other accident except only magnitude or extension, and aptness to receive form and other accident. So that whensoever we have use of the name *body in general*, if we use that of *materia prima*, we do well. For when a man, not knowing which was first, water or ice, would find out which of the two were the matter of both, he would be fain to suppose some third matter which were neither of these two; so he that would find out what is the matter of all things ought to suppose such as is not the matter of anything that exists. Wherefore *materia prima* is nothing; and therefore they do not attribute to it form or any other accident, besides quantity; whereas all singular things have their forms and accidents certain.

"*Materia prima* therefore is body in general, that is, body considered universally, not as having neither form nor any accident, but in which no form nor any other accident but quantity are at all considered, that is, they are not drawn into argumentation." — p. 118.

The next great name in English philosophy is Locke's. His philosophy is nominalistic, but does not regard things from a logical point of view at all. Nominalism, however, appears in psychology as sensationalism; for nominalism arises from taking that view of reality which regards whatever is in thought as caused by something in sense, and whatever is in sense as caused by something without the mind. But

everybody knows that this is the character of Locke's philosophy. He believed that every idea springs from sensation and from his (vaguely explained) reflection.

Berkeley is undoubtedly more the offspring of Locke than of any other philosopher. Yet the influence of Hobbes with him is very evident and great; and Malebranche doubtless contributed to his thought. But he was by nature a radical and a nominalist. His whole philosophy rests upon an extreme nominalism of a sensationalistic type. He sets out with the proposition (supposed to have been already proved by Locke), that all the ideas in our minds are simply reproductions of sensations, external and internal. He maintains, moreover, that sensations can only be thus reproduced in such combinations as might have been given in immediate perception. We can conceive a man without a head, because there is nothing in the nature of sense to prevent our seeing such a thing; but we cannot conceive a sound without any pitch, because the two things are necessarily united in perception. On this principle he denies that we can have any abstract general ideas, that is, that universals can exist in the mind; if I think of a man it must be either of a short or a long or a middle-sized man, because if I see a man he must be one or the other of these. In the first draft of the Introduction of the Principles of Human Knowledge, which is now for the first time printed, he even goes so far as to censure Ockam for admitting that we can have general terms in our mind; Ockam's opinion being that we have in our minds conceptions, which are singular themselves, but are *signs* of many things.* But Berkeley probably knew only of Ockam from hearsay, and perhaps thought he occupied a position like that of Locke. Locke had a very singular opinion on the subject of general conceptions. He says:—

“If we nicely reflect upon them, we shall find that general ideas are fictions, and contrivances of the mind, that carry difficulty with them, and do not so easily offer themselves as we are apt to imagine. For example, does it not require some pains and skill to form the general idea of a triangle (which is none of the most abstract, comprehensive, and difficult); for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scale-

* The sole difference between Ockam and Hobbes is that the former admits the universal signs in the mind to be natural, while the latter thinks they only follow instituted language. The consequence of this difference is that, while Ockam regards all truth as depending on the mind's naturally imposing the same sign on two things, Hobbes will have it that the first truths were established by convention. But both would doubtless allow that there is something *in re* to which such truths corresponded. But the sense of Berkeley's implication would be that there are no universal thought-signs at all. Whence it would follow that there is no truth and no judgments but propositions spoken or on paper.

non, but all and none of these at once? In effect, is something imperfect that cannot exist, an idea wherein some parts of several different and inconsistent ideas are put together."

To this Berkeley replies: —

"Much is here said of the difficulty that abstract ideas carry with them, and the pains and skill requisite in forming them. And it is on all hands agreed that there is need of great toil and labor of the mind to emancipate our thoughts from particular objects, and raise them to those sublime speculations that are conversant about abstract ideas. From all which the natural consequence should seem to be, that so difficult a thing as the forming of abstract ideas was not necessary to communication, which is so easy and familiar to all sort of men. But we are told, if they seem obvious and easy to grown men, it is only because by constant and familiar use they are made so. Now, I would fain know at what time it is men are employed in surmounting that difficulty. It cannot be when they are grown up, for then it seems they are not conscious of such painstaking; it remains, therefore, to be the business of their childhood. And surely the great and multiplied labor of framing abstract notions will be found a hard task at that tender age. Is it not a hard thing to imagine that a couple of children cannot prate together of their sugar-plums and rattles, and the rest of their little trinkets, till they have first tacked together numberless inconsistencies, and so formed in their minds abstract general ideas, and annexed them to every common name they make use of?"

In his private note-book Berkeley has the following: —

"*Mem.* To bring the killing blow at the last, e. g. in the matter of abstraction to bring Locke's general triangle in the last."

There was certainly an opportunity for a splendid blow here, and he gave it.

From this nominalism he deduces his idealistic doctrine. And he puts it beyond any doubt that, if this principle be admitted, the existence of matter must be denied. Nothing that we can know or even think can exist without the mind, for we can only think reproductions of sensations, and the *esse* of these is *percipi*. To put it another way, we cannot think of a thing as existing unperceived, for we cannot separate in thought what cannot be separated in perception. It is true, I can think of a tree in a park without anybody by to see it; but I cannot think of it without anybody to imagine it; for I am aware that I am imagining it all the time. Syllogistically: trees, mountains, rivers, and all sensible things are perceived; and anything which is perceived is a sensation; now for a sensation to exist without being perceived is impossible; therefore, for any sensible thing to exist out of perception is impossible. Nor can there be anything out of the mind which *resembles* a sensible object, for the conception of likeness

cannot be separated from likeness between ideas, because that is the only likeness which can be given in perception. An idea can be nothing but an idea, and it is absurd to say that anything inaudible can resemble a sound, or that anything invisible can resemble a color. But what exists without the mind can neither be heard nor seen ; for we perceive only sensations within the mind. It is said that *Matter* exists without the mind. But what is meant by matter ? It is acknowledged to be known only as *supporting* the accidents of bodies ; and this word 'supporting' in this connection is a word without meaning. Nor is there any necessity for the hypothesis of external bodies. What we observe is that we have ideas. Were there any use in supposing external things it would be to account for this fact. But grant that bodies exist, and no one can say how they can possibly affect the mind ; so that instead of removing a difficulty, the hypothesis only makes a new one.

But though Berkeley thinks we know nothing out of the mind, he by no means holds that all our experience is of a merely phantasmagoric character. It is not all a dream ; for there are two things which distinguish experience from imagination : one is the superior vividness of experience ; the other and most important is its connected character. Its parts hang together in the most intimate and intricate conjunction, in consequence of which we can infer the future from the past. "These two things it is," says Berkeley, in effect, "which constitute reality. I do not, therefore, deny the reality of common experience, although I deny its externality." Here we seem to have a third new conception of reality, different from either of those which we have insisted are characteristic of the nominalist and realist respectively, or if this is to be identified with either of those, it is with the realist view. Is not this something quite unexpected from so extreme a nominalist ? To us, at least, it seems that this conception is indeed required to give an air of common sense to Berkeley's theory, but that it is of a totally different complexion from the rest. It seems to be something imported into his philosophy from without. We shall glance at this point again presently. He goes on to say that ideas are perfectly inert and passive. One idea does not make another and there is no power or agency in it. Hence, as there must be some cause of the succession of ideas, it must be *Spirit*. There is no *idea* of a spirit. But I have a consciousness of the operations of my spirit, what he calls a *notion* of my activity in calling up ideas at pleasure, and so have a relative knowledge of myself as an active being. But there is a succession of ideas not dependent on my will, the ideas of perception. Real things do not depend on my thought, but have an existence distinct from

being perceived by me; but the *esse* of everything is *percipi*; therefore, *there must be some other mind wherein they exist*. "As sure, therefore, as the sensible world really exists, so sure do there an infinite omnipotent Spirit who contains and supports it." This puts the keystone into the arch of Berkeleyan idealism, and gives a theory of the relation of the mind to external nature which, compared with the Cartesian Divine Assistance, is very satisfactory. It has been well remarked that, if the Cartesian dualism be admitted, no divine *assistance* can enable things to affect the mind or the mind things, but divine power must do the whole work. Berkeley's philosophy, like so many others, has partly originated in an attempt to escape the inconveniences of the Cartesian dualism. God, who has created our spirits, has the power immediately to raise ideas in them; and out of his wisdom and benevolence, he does this with such regularity that these ideas may serve as signs of one another. Hence, the laws of nature. Berkeley does not explain how our wills act on our bodies, but perhaps he would say that to a certain limited extent we can produce ideas in the mind of God as he does in ours. But a material thing being only an idea, exists only so long as it is in some mind. Should every mind cease to think it for a while, for so long it ceases to exist. Its permanent existence is kept up by its being an idea in the mind of God. Here we see how superficially the just-mentioned theory of reality is laid over the body of his thought. If the reality of a thing consists in its harmony with the body of realities, it is a quite needless extravagance to say that it ceases to exist as soon as it is no longer thought of. For the coherence of an idea with experience in general does not depend at all upon its being actually present to the mind all the time. But it is clear that when Berkeley says that reality consists in the connection of experience, he is simply using the word *reality* in a sense of his own. That *an object's independence of our thought about it* is constituted by its connection with experience in general, he has never conceived. On the contrary, that, according to him, is effected by its being in the mind of God. In the usual sense of the word *reality*, therefore, Berkeley's doctrine is that the reality of sensible things resides only in their archetypes in the divine mind. This is Platonistic, but it is not realistic. On the contrary, since it places reality wholly out of the mind in the cause of sensations, and since it denies reality (in the true sense of the word) to sensible things in so far as they are sensible, it is distinctly nominalistic. Historically there have been prominent examples of an alliance between nominalism and Platonism. Abélard and John of Salisbury, the only two defenders of nominalism of the time of the great controversy whose works remain to us, are both Platonists; and Roscellin, the famous

author of the *sententia de flatu vocis*, the first man in the Middle Ages who carried attention to nominalism, is said and believed (all his writings are lost) to have been a follower of Scotus Erigena, the great Platonist of the ninth century. The reason of this odd conjunction of doctrines may perhaps be guessed at. The nominalist, by isolating his reality so entirely from mental influence as he has done, has made it something which the mind cannot conceive; he has created the so often talked of "improportion between the mind and the thing in itself." And it is to overcome the various difficulties to which this gives rise, that he supposes this *noumenon*, which, being totally unknown, the imagination can play about as it pleases, to be the emanation of archetypal ideas. The reality thus receives an intelligible nature again, and the peculiar inconveniences of nominalism are to some degree avoided.

It does not seem to us strange that Berkeley's idealistic writings have not been received with much favor. They contain a great deal of argumentation of doubtful soundness, the dazzling character of which puts us more on our guard against it. They appear to be the productions of a most brilliant, original, powerful, but not thoroughly disciplined mind. He is apt to set out with wildly radical propositions, which he qualifies when they lead him to consequences he is not prepared to accept, without seeing how great the importance of his admissions is. He plainly begins his principles of human knowledge with the assumption that we have nothing in our minds but sensations, external and internal, and reproductions of them in the imagination. This goes far beyond Locke; it can be maintained only by the help of that "mental chemistry" started by Hartley. But soon we find him admitting various *notions* which are not *ideas*, or reproductions of sensations, the most striking of which is the notion of a cause, which he leaves himself no way of accounting for experientially. Again, he lays down the principle that we can have no ideas in which the sensations are reproduced in an order or combination different from what could have occurred in experience; and that therefore we have no abstract conceptions. But he very soon grants that we can consider a triangle, without attending to whether it is equilateral, isosceles, or scalene; and does not reflect that such exclusive attention constitutes a species of abstraction. His want of profound study is also shown in his so wholly mistaking, as he does, the function of the hypothesis of matter. He thinks its only purpose is to account for the production of ideas in our minds, so occupied is he with the Cartesian problem. But the real part that material substance has to play is to account for (or formulate) the constant connection between the accidents. In his theory, this office is performed by the wisdom and be-

nevolence of God in exciting ideas with such regularity that we can know what to expect. This makes the unity of accidents a rational unity, the material theory makes it a unity not of a *directly* intellectual origin. The question is, then, which does experience, which does science decide for? Does it appear that in nature all regularities are directly rational, all causes final causes; or does it appear that regularities extend beyond the requirement of a rational purpose, and are brought about by mechanical causes. Now science, as we all know, is generally hostile to the final causes, the operation of which it would restrict within certain spheres, and it finds decidedly an other than directly intellectual regularity in the universe. Accordingly the claim which Mr. Collyns Simon, Professor Fraser, and Mr. Archer Butler make for Berkeleyanism, that it is especially fit to harmonize with scientific thought, is as far as possible from the truth. The sort of science that his idealism would foster would be one which should consist in saying what each natural production was made for. Berkeley's own remarks about natural philosophy show how little he sympathized with physicists. They should all be read; we have only room to quote a detached sentence or two:—

“ To endeavor to explain the production of colors or sound by figure, motion, magnitude, and the like, must needs be labor in vain. . . . In the business of gravitation or mutual attraction, because it appears in many instances, some are straightway for pronouncing it *universal*; and that to attract and be attracted by every body is an essential quality inherent in all bodies whatever. . . . There is nothing necessary or essential in the case, but it depends entirely on the will of the Governing Spirit, who causes certain bodies to cleave together or tend towards each other according to various laws, whilst he keeps others at a fixed distance; and to some he gives a quite contrary tendency, to fly asunder just as he sees convenient. . . . First, it is plain philosophers amuse themselves in vain, when they inquire for any natural efficient cause, distinct from *mind* or *spirit*. Secondly, considering the whole creation is the workmanship of a *wise and good Agent*, it should seem to become philosophers to employ their thoughts (contrary to what some hold) about the final causes of things; and I must confess I see no reason why pointing out the various ends to which natural things are adapted, and for which they were originally with unspeakable wisdom contrived, should not be thought one good way of accounting for them, and altogether worthy of a philosopher.”—Vol. I. p. 466.

After this how can his disciples say “*that the true logic of physics is the first conclusion from his system!*”

As for that argument which is so much used by Berkeley and others, that such and such a thing cannot exist because we cannot so much as frame the idea of such a thing, — that matter, for example, is impossible because it is an abstract idea, and we have no abstract ideas, — it ap-

pears to us to be a mode of reasoning which is to be used with extreme caution. Are the facts such, that if we could have an idea of the thing in question, we should infer its existence, or are they not? If not, no argument is necessary against its existence, until something is found out to make us suspect it exists. But if we ought to infer that it exists, if we only could frame the idea of it, why should we allow our mental incapacity to prevent us from adopting the proposition which logic requires? If such arguments had prevailed in mathematics (and Berkeley was equally strenuous in advocating them there), and if everything about negative quantities, the square root of *minus*, and infinitesimals, had been excluded from the subject on the ground that we can form no idea of such things, the science would have been simplified no doubt, simplified by never advancing to the more difficult matters. A better rule for avoiding the deceits of language is this: Do things fulfil the same function practically? Then let them be signified by the same word. Do they not? Then let them be distinguished. If I have learned a formula in gibberish which in any way jogs my memory so as to enable me in each single case to act as though I had a general idea, what possible utility is there in distinguishing between such a gibberish and formula and an idea? Why use the term *a general idea* in such a sense as to separate things which, for all experiential purposes, are the same?

The great inconsistency of the Berkeleyan theory, which prevents his nominalistic principles from appearing in their true colors, is that he has not treated mind and matter in the same way. All that he has said against the existence of matter might be said against the existence of mind; and the only thing which prevented his seeing that, was the vagueness of the Lockian *reflection*, or faculty of internal perception. It was not until after he had published his systematic exposition of his doctrine, that this objection ever occurred to him. He alludes to it in one of his dialogues, but his answer to it is very lame. Hume seized upon this point, and, developing it, equally denied the existence of mind and matter, maintaining that only appearances exist. Hume's philosophy is nothing but Berkeley's, with this change made in it, and written by a mind of a more sceptical tendency. The innocent bishop generated Hume; and as no one disputes that Hume gave rise to all modern philosophy of every kind, Berkeley ought to have a far more important place in the history of philosophy than has usually been assigned to him. His doctrine was the half-way station, or necessary resting-place between Locke's and Hume's.

Hume's greatness consists in the fact that he was the man who had the courage to carry out his principles to their utmost consequences,

without regard to the character of the conclusions he reached. But neither he nor any other one has set forth nominalism in an absolutely thoroughgoing manner; and it is safe to say that no one ever will, unless it be to reduce it to absurdity.

We ought to say one word about Berkeley's theory of vision. It was undoubtedly an extraordinary piece of reasoning, and might have served for the basis of the modern science. Historically it has not had that fortune, because the modern science has been chiefly created in Germany, where Berkeley is little known and greatly misunderstood. We may fairly say that Berkeley taught the English some of the most essential principles of that hypothesis of sight which is now getting to prevail, more than a century before they were known to the rest of the world. This is much; but what is claimed by some of his advocates is astounding. One writer says that Berkeley's theory has been accepted by the leaders of all schools of thought! Professor Fraser admits that it has attracted no attention in Germany, but thinks the German mind too *a priori* to like Berkeley's reasoning. But Helmholtz, who has done more than any other man to bring the empiricist theory into favor, says: "Our knowledge of the phenomena of vision is not so complete as to allow only one theory and exclude every other. It seems to me that the choice which different *savans* make between different theories of vision has thus far been governed more by their metaphysical inclinations than by any constraining power which the facts have had." The best authorities, however, prefer the empiricist hypothesis; the fundamental proposition of which, as it is of Berkeley's, is that the sensations which we have in seeing are signs of the relations of things whose interpretation has to be discovered inductively. In the enumeration of the signs and of their uses, Berkeley shows considerable power in that sort of investigation, though there is naturally no very close resemblance between his and the modern accounts of the matter. There is no modern physiologist who would not think that Berkeley had greatly exaggerated the part that the muscular sense plays in vision.

Berkeley's theory of vision was an important step in the development of the associationist psychology. He thought all our conceptions of body and of space were simply reproductions in the imagination of sensations of touch (including the muscular sense). This, if it were true, would be a most surprising case of mental chemistry, that is of a sensation being felt and yet so mixed with others that we cannot by an act of simple attention recognize it. Doubtless this theory had its influence in the production of Hartley's system.

Hume's phenomenism and Hartley's associationism were put

forth almost contemporaneously about 1750. They contain the fundamental positions of the current English "positivism." From 1750 down to 1830 — eighty years — nothing of particular importance was added to the nominalistic doctrine. At the beginning of this period Hume's was toning down his earlier radicalism, and Smith's theory of Moral Sentiments appeared. Later came Priestley's materialism, but there was nothing new in that; and just at the end of the period, Brown's Lectures on the Human Mind. The great body of the philosophy of those eighty years is of the Scotch common-sense school. It is a weak sort of realistic reaction, for which there is no adequate explanation within the sphere of the history of philosophy. It would be curious to inquire whether anything in the history of society could account for it. In 1829 appeared James Mill's *Analysis of the Human Mind*, a really great nominalistic book again. This was followed by Stuart Mill's *Logic* in 1843. Since then, the school has produced nothing of the first importance; and it will very likely lose its distinctive character now for a time, by being merged in an empiricism of a less metaphysical and more working kind. Already in Stuart Mill the nominalism is less salient than in the classical writers; though it is quite unmistakable.

Thus we see how large a part of the metaphysical ideas of to-day have come to us by inheritance from very early times, Berkeley being one of the intellectual ancestors whose labors did as much as any one's to enhance the value of the bequest. The realistic philosophy of the last century has now lost all its popularity, except with the most conservative minds. And science as well as philosophy is nominalistic. The doctrine of the correlation of forces, the discoveries of Helmholtz, and the hypotheses of Liebig and of Darwin, have all that character of explaining familiar phenomena apparently of a peculiar kind by extending the operation of simple mechanical principles, which belongs to nominalism. Or if the nominalistic character of these doctrines themselves cannot be detected, it will at least be admitted that they are observed to carry along with them those daughters of nominalism, — sensationalism, phenomenalism, individualism, and materialism. That physical science is necessarily connected with doctrines of a debasing moral tendency will be believed by few. But if we hold that such an effect will not be produced by these doctrines on a mind which really understands them, we are accepting this belief, not on experience, which is rather against it, but on the strength of our general faith that what is really true it is good to believe and evil to reject. On the other hand, it is allowable to suppose that science has no essential affinity with the philosophical views with which it seems to be every year more

associated. History cannot be held to exclude this supposition ; and science as it exists is certainly much less nominalistic than the nominalists think it should be. Whewell represents it quite as well as Mill. Yet a man who enters into the scientific thought of the day and has not materialistic tendencies, is getting to be an impossibility. So long as there is a dispute between nominalism and realism, so long as the position we hold on the question is not determined by any proof *indisputable*, but is more or less a matter of inclination, a man as he gradually comes to feel the profound hostility of the two tendencies will, if he is not less than man, become engaged with one or other and can no more obey both than he can serve God and Mammon. If the two impulses are neutralized within him, the result simply is that he is left without any great intellectual motive. There is, indeed, no reason to suppose the logical question is in its own nature unsusceptible of solution. But that path out of the difficulty lies through the thorniest mazes of a science as dry as mathematics. Now there is a demand for mathematics ; it helps to build bridges and drive engines, and therefore it becomes somebody's business to study it severely. But to have a philosophy is a matter of luxury ; the only use of that is to make us feel comfortable and easy. It is a study for leisure hours ; and we want it supplied in an elegant, an agreeable, an interesting form. The law of natural selection, which is the precise analogue in another realm of the law of supply and demand, has the most immediate effect in fostering the other faculties of the understanding, for the men of mental power succeed in the struggle for life ; but the faculty of philosophizing, except in the literary way, is not called for ; and therefore a difficult question cannot be expected to reach solution until it takes some practical form. If anybody should have the good luck to find out the solution, nobody else would take the trouble to understand it. But though the question of realism and nominalism has its roots in the technicalities of logic, its branches reach about our life. The question whether the *genus homo* has any existence except as individuals, is the question whether there is anything of any more dignity, worth, and importance than individual happiness, individual aspirations, and individual life. Whether men really have anything in common, so that the *community* is to be considered as an end in itself, and if so, what the relative value of the two factors is, is the most fundamental practical question in regard to every public institution the constitution of which we have it in our power to influence.

6.—*The Fall of England! The Battle of Dorking: Reminiscences of a Volunteer.* By a Contributor to "Blackwood." New York: G. P. Putnam and Sons. 12mo. pp. 66.

A COLLECTION of English invasion-panic literature would make a rare addition to any of our public libraries. Some two thousand years ago it was a boast of the Spartans that no Lacedæmonian woman had ever seen the smoke of a hostile camp-fire. It is now more than six-score years since any spectacle of this kind has offended the eyes of the English matron; but, in spite of this long-continued immunity the Briton periodically indulges in a paroxysm of alarm over some vividly pictured invasion, which he solemnly, and to the great amusement of his neighbors, succeeds in persuading himself is imminent. These flurries always follow a certain course and lead to one result. A *bête noir* is first settled upon; some foreign nation, usually France, though upon occasion Russia, Prussia, or even America, will do almost as well, is decided to be bent upon sacking London and humiliating England, and proof positive of this evil intention is deduced from the fact that the people in question is notoriously evil disposed, and has recently won a victory, or has invented an improved system of armament, or is fortifying a harbor, or equipping a fleet. The half-pay officer and professional alarmist take up the cry. The "outs" join lustily in it. The "ins" follow the "outs." The inefficiency of every branch of the national defences is scathingly exposed; it is proved to general satisfaction that England has no army and no navy, and indeed enjoys a continued national existence only through foreign sufferance. Parliament scolds; the poet-laureate fires the British heart with some doggerel, "Form! form! riflemen, form!" etc.; innumerable respectable shopkeepers and middle-aged professional gentlemen make themselves ridiculous by trying to learn the goose-step; Punch depicts some leading member of the Peace Society as a donkey braying at the muzzle of a loaded cannon; the "Times" thunders; the Ministry looks immensely wise and grave, and refers with awful mystery to "information which it would not be judicious at this moment to make public"; and then, having provided for an expenditure of a few millions of money, Parliament adjourns with a sense of gratitude that something is now in a way of being done; and a waking sobriety begins to make itself felt. Does the Briton ever feel silly after one of these self-inflicted penances? That, the outer world never knows; he certainly does not confess it. Yet if anything could humiliate a people, it should be in some calmer moment to turn from a perusal of the two hundred thousandth of "The Battle of Dorking," and the flood of other literature of a like character which deluged

England at the close of the Franco-Prussian war of 1870, to a study of Richard Cobden's pamphlet of ten years before, entitled "The Three Panics: An Historical Episode." He there, with pitiless precision and calmness, describes three great flurries, each more senseless than the one which preceded it, which swept over the British Isles in the brief space of fifteen years, between 1847 and 1861. The oldest, the most sagacious, and the boldest British statesmen contorted themselves during that period no less unnecessarily than did a parcel of old women, who either never had had any nerve, or whose nerves were completely gone. The aged Duke of Wellington, and the yet more aged Lord Lyndhurst, the jaunty Palmerston, the matter-of-fact Russell, and the fiery Derby, each in his turn pulled on the cap-and-bells, and, before astonished Europe, vied with a monomaniac like old Sir Charles Napier or a sensationalist like Mr. Horsman, in the contortions of alarm.

It really seems as if the ingenious author of "The Battle of Dorking" must have got all but the details of his story from some of the extravagances of these eminent men. That such statements should ever have been made as are now on the record of those fifteen years seems incredible. For instance, the Duke of Wellington asserted "that, excepting immediately under the fire of Dover Castle, there is not a spot on the coast on which infantry might not be thrown on shore *at any time of tide, with any wind and in any weather*," etc. The Duke of Wellington's assertion upon such a point was of course conclusive; it can only be said in reply, that it is a great pity that the advantages in this respect enjoyed by infantry cannot be shared also by the travelling public. Lord Ellesmere, so long ago as 1848, foresaw all the horrors of "Dorking," for he then published a letter in which he described how "in ease of an invasion, the Guards would march out at one end of the metropolis as the French entered at the other, and that on the Lord Mayor would be imposed the duty of converting the Mansion House into a place where billets would be found for the foreign army." Lord Palmerston also might lay claims to some part of the Dorking *brochure*, for, in describing the rapidity with which an invasion might be made, he actually had the audacity to assert in Parliament that "the very ship despatched to convey to this country intelligence of the threatened armament *would probably not reach our shores much sooner than the hostile expedition*." Lord Ellenborough, in the midst of profound peace, next cried out for "seventy line-of-battle ships," and, also, "for forts to protect all the ports, and all the roads in which it would be possible for an enemy to place a fleet," etc. Then Mr. Horsman made himself ridiculous with a picture of "London taken," and cried aloud that "no human tongue could tell how suddenly it might arrive, and that it might still be distant was our

good fortune, of which we should make the most. Every public or private yard should be put in full work ; every artificer and extra hand should work extra hours, as if the war were to begin next week. As gun-boats could be built more rapidly than men-of-war, gun-boats should be multiplied as fast as possible ; as volunteers could be enrolled faster than the line, they should at once be raised ; as rifles could not be made fast enough in England, we should renew that order in Belgium, even though they should cost sixpence apiece more than the Horse Guards regulation ; and, night and day, the process of manufacturing, constructing, arming, drilling, should go on till the country was made safe, and then we might desist from preparations, and return to our peace expenditure, with *the certainty that these humiliating, lowering, and degrading panic cries of invasion would never disturb our country or our government again.*"

Finally, poor old Sir Charles Napier raised his maddened scream of alarm until his voice fairly rung out above all the panic-stricken chorus : "France is equal to us in ships and superior in the means of manning them. She has an army of 300,000 or 400,000 men, and we have but 20,000 in Great Britain. What would the consequence be if a war were to spring up ? Why, there would be an invasion immediately. . . . Let the House look at our condition at the present moment. We have no Channel fleet. In a few months we shall not have a line-of-battle ship in England ; and, in case of a sudden war with France and Russia, *I do not believe the Queen's throne would be worth six months' purchase.*" Then he described Cherbourg, and peopled its huge docks with phantom ships, describing how "the troops could walk on board ; *cavalry, mounted on their horses, could ride on board* ; and artillery could easily be shipped, for thirty sail of the line could lie alongside of the wharves alone." This practical and surprising introduction of horse marines into actual service sufficed only for a moment ; the next year his mind was filled with visions of the Russian fleet coming up the Channel ; and he at last fairly overcame the gravity of the Commons by a piteous exclamation that, in such an emergency, "what would become of the Funds, God only knows." Apparently, however, the information in this last respect has since 1859 been more generally imparted, as the veracious narrator of the Dorking conflict is particular to inform us that, upon the occurrence of a similar calamity in 1875, the Funds fell to exactly 35.

We do not propose to make any criticism upon either the literary or military talent displayed by the author of this most successful squib. In fact it hardly merits any such notice. It is certainly very cleverly done, but the most remarkable thing about it has been the pure good

fortune with which it happened, like its far less meritorious predecessor, "Dame Europa's School," to drop into a condition of the public mind exactly predisposed to receive it. The author has simply drawn a very great prize in a very old lottery. His name has, we believe, never yet been announced, but he evidently is or has been himself a soldier; there is a very strong suspicion of red-tape and pipe-clay both in his military dispositions and his comments on volunteer soldiery. He is probably a man who would heartily concur in the remark attributed to Von Moltke, that he had never read any account of the late civil war in America, because he did not like to have his mind confused with what was really nothing but the report of the doings of a mob. Certainly if any sane American graduate of our late war, whether general, colonel, or captain, were to draw up his men in the method described in the battle of Dorking, he would richly deserve to be beaten first and court-martialled afterwards. Have European nations never yet heard of the shovel and the temporary earthwork as important protections for young troops against the modern arms of precision? Judging by the recent French and Austrian wars, there would seem great reason to conclude that this is the case. If it is so, Von Moltke to the contrary notwithstanding, they all have something yet to learn from what a previous contributor to "Blackwood," Mr. Cornelius O'Dowd, once facetiously described as "the fight over the way," where "two madmen were engaged in a struggle not one single rule or maxim of which did they comprehend."

Upon the occasion of a similar flurry several years ago, that hard-headed old Scotchman, Mr. Joseph Hume, somewhat roughly remarked in the House of Commons, "Our present panics are not due, as in times past, to the old women, but to our having too many clubs about London, containing so many half-pay officers, who had nothing to do but to look about for themselves and their friends. These were the people who wrote to the newspapers, anxious to bring grist to the mill somehow or other." This home truth was uttered in 1851; but unless we are gravely mistaken, it indicates pretty clearly the source from whence originated both the English invasion panic of 1871 and its most successful literary expression.

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